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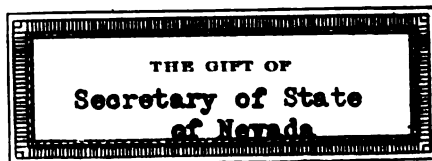
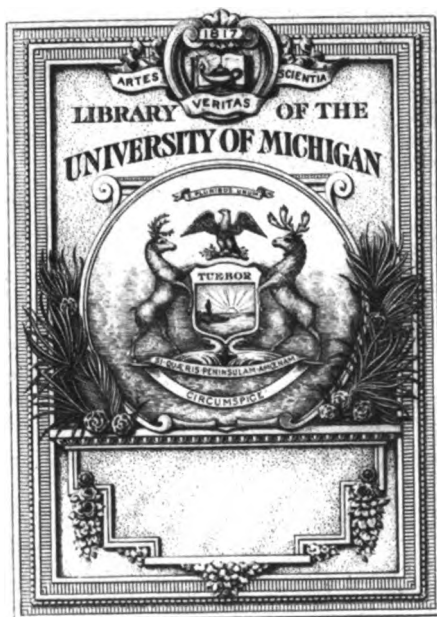
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APPENDIX

TO

Journals of Senate and Assembly

OF THE



TWENTY-SEVENTH SESSION

OF THE

P. Nevada. LEGISLATURE OF THE STATE OF NEVADA

1915



VOLUME II



CARSON CITY, NEVADA

STATE PRINTING OFFICE . . . JOE FARNSWORTH, SUPERINTENDENT

1915

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- 21—Annual Report of the Railroad Commission of Nevada for the year 1913.
- 22—Annual Report of the Railroad Commission of Nevada for the year 1914.
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- 25—Biennial Report of the Nevada State Police for the years 1913 and 1914.
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AGRICULTURAL EXPERIMENT STATION
THE UNIVERSITY OF NEVADA

Annual Report of the Board of Control for the Fiscal Year Ending June 30, 1913



PUBLISHED BY THE UNIVERSITY OF NEVADA
RENO, NEVADA



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT

1914



AGRICULTURAL EXPERIMENT STATION
THE UNIVERSITY OF NEVADA

Annual Report of the Board of Control, The Director, and the Members of the Station Staff



For the Fiscal Year Ending June 30, 1913



PUBLISHED BY THE UNIVERSITY OF NEVADA
RENO, NEVADA

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THE AGRICULTURAL EXPERIMENT STATION

BOARD OF CONTROL

The HON. HOSEA E. REID (1911-1915), Chairman.....	Reno
The HON. CHARLES B. HENDERSON (1911-1915).....	Elko
The HON. ARTHUR A. CODD (1913-1917).....	Reno
The HON. JAMES W. O'BRIEN (1913-1915).....	Sparks
The HON. WALTER E. PRATT (1913-1917).....	Goldfield
Mr. GEORGE H. TAYLOR, Secretary.....	Reno
Mr. CHARLES H. GORMAN, Comptroller.....	Reno

STATION STAFF

JOSEPH EDWARD STUBBS, LL.D. ¹	President
ROBERT LEWERS.....	Vice- and Acting President
GORDON H. TRUE ²	Director and Animal Husbandman
PATRICK BEVERIDGE KENNEDY, Ph.D.....	In charge of Botany, Horti- culture and Forestry
A. ARTHUR HELLER, Sc.D. ²	Assistant in Botany, Horticulture and Forestry
FRANK L. PETERSON, B.S.	Irrigation Engineer
SAMUEL BRADFORD DOTEN, M.A.	Entomologist
WINFRED BERDELL MACK, D.V.M.....	Bacteriologist and Veterinarian
JAMES EDWARD CHURCH, JR., Ph.D.	Meteorologist
STERLING PRICE FERGUSSON.....	Associate Meteorologist
CARL ALFRED JACOBSON, Ph.D.....	Chemist
ERNEST ALBERT HOWES ²	Agronomist
PETER FRANDSEN, A.M.....	Consulting Biologist
MAXWELL ADAMS, Ph.D.....	Consulting Chemist
LESLIE THEODORE SHARP, B.S.....	In Charge of Soil Investigations
VERNER E. SCOTT, B.S.....	Consulting Dairy Husbandman and Assistant Animal Husbandman
CHARLES LEROY BROWN, M.A. ²	In Charge of Eelworm Investigations
THEODORE W. CLARK.....	Superintendent of Farm
Mrs. T. W. COWGILL, M.A.....	Librarian
Mrs. LOUISE BLANEY.....	Station Secretary

¹On leave of absence, 1912-1913. ²Resigned June 30, 1913.

LETTERS OF TRANSMITTAL

RENO, NEVADA, January 5, 1914.

To His Excellency, TASKER L. ODDIE, Governor of Nevada.

SIR: I have the honor to submit herewith the Annual Report of the Board of Control of the Nevada Agricultural Experiment Station for the fiscal year ending June 30, 1913.

HOSEA E. REID,

*Chairman of the Board of Control,
Nevada Agricultural Experiment Station.*

GEO. H. TAYLOR, *Secretary.*

AGRICULTURAL EXPERIMENT STATION, UNIVERSITY OF NEVADA,

RENO, NEVADA, June 30, 1913.

HON. HOSEA E. REID, *Chairman Board of Control, Nevada Agricultural Experiment Station.*

SIR: I have the honor to transmit herewith the Annual Report of the Agricultural Experiment Station for the year ending June 30, 1913.

Respectfully submitted,

ROBERT LEWERS,

Acting President.

FINANCIAL REPORT

Nevada Agricultural Experiment Station

IN ACCOUNT WITH

The United States Appropriations, 1912-1913

Items	Hatch Fund	Adams Fund
<i>Debtor</i>		
To balance from appropriations for 1911-1912.....		
Receipts from the Treasurer of the United States, as per appropriations for fiscal year ended June 30, 1913, under Acts of Congress approved March 2, 1887 (Hatch Fund), and March 16, 1906 (Adams Fund).....	\$15,000.00	\$15,000.00
<i>Creditor</i>		
<i>Abstract</i>		
By salaries.....1	\$8,809.27	\$11,306.10
By labor.....2	2,392.20	313.46
By publications.....3	20.00	
By postage and stationery.....4	398.64	29.58
By freight and express.....5	198.11	71.02
By heat, light, water, and power.....6	117.05	124.60
By chemicals and laboratory supplies.....7	304.89	191.77
By seeds, plants and sundry supplies.....8	386.99	135.98
By fertilizers.....9		
By feeding stuffs.....10	25.88	262.10
By library.....11	.54	10.71
By tools, machinery and appliances.....12	232.68	32.00
By furniture and fixtures.....13	348.96	70.00
By scientific apparatus and specimens.....14	199.60	261.10
By live stock.....15	139.00	8.50
By traveling expenses.....16	496.80	646.94
By contingent expenses.....17		15.00
By buildings and land.....18	209.10	51.06
Unexpended June 30, 1913.....	725.00	1,483.80
Totals.....	\$15,000.00	\$15,000.00

SUPPLEMENTARY STATEMENT

Items	State appropriations	Fees	Farm products	Miscellaneous	Totals
<i>Debtor</i>					
To balance on hand.....	\$2,379.87		\$145.72		\$2,525.59
To receipts from other sources than the United States.....	5,000.00		189.70		5,189.70
Totals.....	\$7,379.87		\$335.42		\$7,715.29
<i>Creditor</i>					
By salaries.....	\$1,050.00				\$1,050.00
By labor.....	25.65		153.25		178.90
By publications.....					
By postage and stationery.....	.96				.96
By freight and express.....	3.96				3.96
By heat, light, water, and power.....	5.00				5.00
By chemicals and laboratory supplies.....	266.64				266.64
By seeds, plants and sundry supplies.....	224.88		33.50		258.38
By fertilizers.....					
By feeding stuffs.....	456.00				456.00
By library.....					
By tools, machinery and appliances.....	32.70		6.92		39.62
By furniture and fixtures.....	238.00				238.00
By scientific apparatus and specimens.....	485.68				485.68
By live stock.....					
By traveling expenses.....	40.40				40.40
By contingent expenses.....					
By buildings and land.....	4,550.00		141.75		4,691.75
By balance.....					
Totals.....	\$7,379.87		\$335.42		\$7,715.29

C. H. GORMAN, *Comptroller.*

REPORT OF THE DIRECTOR

To the Acting President of the University of Nevada.

SIR: I have the honor to submit herewith in obedience to the Congressional Acts of March 2, 1887, and March 16, 1906, my second annual report. This report covers the work of the Station from June 1, 1912, to June 30, 1913.

The following changes have been made in the organization of the departments of the Station for the year ending June 30, 1913:

Professor E. A. Howes, of the Seed Branch of the Department of Agriculture of the Dominion of Canada, took up his work as Professor of Agronomy in the University and Field Husbandman in the Station in August, 1912, but resigns at the end of the fiscal year, June 30, 1913.

Mr. L. T. Sharp came from the University of California to take charge of soil investigations.

Mr. Chas. L. Brown, who has been in charge of the eelworm investigations—a special project under the Adams Fund—severs his connection with the Station at the end of the fiscal year and the project will be discontinued.

Professor A. A. Heller, Assistant Botanist, Horticulturist, and Forester, also leaves the Station at the close of the fiscal year, as does Professor Gordon H. True, Director.

Mr. V. E. Scott, elected as Instructor in Dairying, August, 1912, has acted as Assistant in Animal Husbandry in the Station.

Dr. C. A. Jacobson, Research Chemist, who was abroad conducting investigations in European laboratories during the last year, returned to the Station in March, 1913.

Dr. P. B. Kennedy, Station Botanist, continues to serve as Chairman of the Board of Control of the State Experimental Farm at Logan, Clark County, Nevada; and Professor Gordon H. True continued to serve as Secretary of the Board of Control of the Elko County Dry Farm. Biennial reports for these two state experimental farms have been issued.

Of the legislative appropriations granted for the support of the Station for the biennial term of 1911 and 1912, about \$1,000 remained for expenditure during the past year. The Legislature of 1913 made the following appropriation: For the support of the Experiment Station for two years, \$5,000.

ADAMS FUND PROJECTS

The projects in hand under the Adams Fund have been continued and a detailed account of each will be found in the departmental reports.

NEW ADAMS FUND PROJECTS

During the year the following new projects were approved by the Office of Experiment Stations and begun:

Soils Research, Project 1—The biological fixation of nitrogen for agricultural purposes.

Project II—A study of the bacterial flora and activity in soils as affected by irrigation. As these were approved late in the year and some delay was experienced in equipping the soil laboratory, they were not more than begun.

In the Department of Chemistry a study of the essential oils of several species of pines was approved under the Adams Fund and begun.

PROJECTS DISCONTINUED

The potato eelworm investigations are to be discontinued at the end of the fiscal year on account of lack of state funds to carry them on. The notes on this investigation will be published later.

WORK UNDER HATCH FUND

Work was carried on under the Hatch Fund by the Department of Agronomy (Field Husbandry) in the matter of a series of soiling experiments in cooperation with the Department of Animal Husbandry. Other problems worked on during the year by the Department of Agronomy were that of growing corn in Nevada for ensilage, a continuation of the experiment in the different rates of irrigation, the growing of Canada field peas carried on with the Department of Animal Husbandry to test the value of these as a hog-finishing product. An experiment was carried on by the Department of Animal Husbandry on the comparison of alfalfa hay and alfalfa silage as a feed for dairy cows.

Under the Hatch Fund the Department of Botany, Horticulture, and Forestry had in hand the following problems: Vegetable gardening, drug-plant investigations, orchard investigations to determine the influence of irrigated and nonirrigated acres of apple orchard on the growth of trees in the production of fruit, and frost-fighting investigations. The orchard investigations have been in operation for ten years, and may now be considered complete. Grass and forage-plant investigations were continued; this has in mind to determine the grasses and forage plants of economic value on the ranges and native meadows of the State.

Under the Hatch Fund the Department of Entomology carried a minor project in the study of methods of washing elms infested with European elm scale. This project was completed and a successful method worked out.

The irrigation experiments in the grain crops of White Australian wheat were continued on the same schedule as in the preceding four years.

COOPERATIVE WORK

In the agreement between the U. S. Department of Agriculture, the Nevada Experiment Station, and the State Engineer, the work in irrigation investigations proceeded according to the articles of agreement. The field work of irrigation investigations for the past year has been a hydrographic study of the valley of the Humboldt; the principal valley studied thus far has been the Lovelock. The work in the soil-tank experiments has been continued on the Experiment Station Farm.

This year we have had several farmers cooperating with us in variety tests. In this connection a tentative Experimental Union of twelve members has been formed. The members of this union are trying out three varieties each of wheat, oats, barley, and peas in plots of one-tenth acre in size. The Station is trying out the same varieties in duplicate.

During the past year the Department of Agronomy installed a seed germinator and did considerable seed testing at the Station for farmers. The Department of Soils Research made analyses of over fifty typical samples of Nevada soils.

There has been no extension work done by the Station further than the cooperative experiments named above, and a fairly considerable amount of correspondence in answer to questions from people in the State, and a few newspaper articles.

STATION PUBLICATIONS

There have been no bulletins published during the past year. The State Legislature at its last session extended an increase of the printing privileges of the Experiment Station so that a monthly 16-page pamphlet in an edition of 1,500 is issued from the State Printing Office at Carson City, Nevada. This has been named "Better Farming," and covers timely and practical articles by the various members of the Station staff.

APPROPRIATIONS

Federal—Hatch Fund	\$15,000
Federal—Adams Fund	15,000
State—Support of Experiment Station	5,000

DEPARTMENTAL REPORTS

The reports of the several departments of the Station are herewith given. Each gives a complete account of the work done by the department under the Hatch and Adams Funds. The departments are as follows:

1. Department of Agriculture and Animal Husbandry.
2. Department of Botany, Horticulture and Forestry.
3. Department of Chemistry.
4. Department of Entomology.
5. Department of Meteorology and Climatology.
6. Department of Veterinary Science and Bacteriology.
7. Department of Library.

The reports of the Department of Food and Drug Control and of the Department of Weights and Measures are published separately.

I have the honor to remain

Yours, very truly,

GORDON H. TRUE,
Director.

DEPARTMENTAL REPORTS

DEPARTMENT OF AGRICULTURE AND ANIMAL HUSBANDRY

GORDON H. TRUE, Animal Husbandry

ERNEST A. HOWES, Agronomy

FRANK L. PETERSON, Irrigation

LESLIE T. SHARP, Soils

VERNER E. SCOTT, Dairying

IRRIGATION EXPERIMENTS

The irrigation experiments in the grain crops of White Australian wheat and Siberian oats were continued on the same schedule as in the preceding four years. Two acres, containing eight one-fifth-acre plats and two one-tenth-acre plats are devoted to each crop. The object of the experiment is two-fold: first, from the viewpoint of the irrigationist, is a study of the relation of the time and amount of irrigation upon the yield of the grain; second, from the viewpoint of the agronomist, the influence of the time and amount of irrigation upon the gluten content of the grain. The schedule of irrigation is based upon the time of heading of the grain (July 1 to 5) and varies from three irrigations before and two after heading (maximum application) to one before and one after heading (minimum application). The fifth-acre plats are each separated by a three-foot walk. Each fifth is diked and irrigated by the flooding system. The soil is a heavy type and there is no interference by later movement of water in the soil. Measurements of water are made by means of a Cippoletti weir.

White Australian Wheat

Area in acres	Irrigations		Yield in pounds	Yield in bushels per acre	Depth of water applied in feet	Yield per acre-foot water in bushels
	Before heading	After heading				
One-fifth	3	2	453	37 bu. 45 lbs.	1.76	21 bu. 26.9 lbs.
One-fifth	3	1	467	38 bu. 55 lbs.	1.26	30 bu. 56.1 lbs.
One-fifth	2	3	446	37 bu. 10 lbs.	1.25	31 bu. 32.5 lbs.
One-fifth	2	2	549	48 bu. 25 lbs.	.92	49 bu. 43.7 lbs.
One-fifth	2	1	364	30 bu. 20 lbs.	1.25	24 bu. 21.8 lbs.
One-fifth	1	3	428	35 bu. 40 lbs.	1.39	25 bu. 35.1 lbs.
One-fifth	1	2	477	39 bu. 45 lbs.	1.32	30 bu. 9.5 lbs.
One-fifth	1	1	332	27 bu. 40 lbs.	1.08	25 bu. 35.6 lbs.

Siberian Oats

One-fifth	3	2	282	44 bu. 2 lbs.	1.8	23 bu. 31.5 lbs.
One-fifth	3	1	245	38 bu. 9 lbs.	1.36	28 bu. 2.0 lbs.
One-fifth	2	3	292	45 bu. 20 lbs.	1.87	24 bu. 18.5 lbs.
One-fifth	2	2	239	36 bu. 23 lbs.	1.64	22 bu. 11.5 lbs.
One-fifth	2	1	234	36 bu. 18 lbs.	1.05	34 bu. 21.0 lbs.
One-fifth	1	3	312	48 bu. 24 lbs.	1.48	32 bu. 31.5 lbs.
One-fifth	1	2	340	53 bu. 4 lbs.	1.08	49 bu. 7.5 lbs.
One-fifth	1	1	232	36 bu. 8 lbs.	.89	40 bu. 18.9 lbs.

Cooperative Work with Irrigation Investigations, United States Department of Agriculture

In a triangular cooperative agreement between the United States Department of Agriculture, the Nevada Agricultural Experiment Station, and the State Engineer, the work in irrigation investigations has proceeded according to the articles of the agreement. The work in the soil-tank experiments is located on the Experiment Station Farm. The experiment during 1912 was enlarged by the addition of six tanks, set concentric with the old alfalfa tanks, and the study of the water requirements of crops was extended to club wheat. The results of the alfalfa tank series seem to warrant that the results are close enough so that we can empty the tanks and use them for oats the coming season. The results of the experiments under the cooperative agreement will be submitted to Washington, D. C., where they will be compiled in conjunction with similar work of other Experiment Stations in the West. After the results have been checked and approved they become available as material for the Station.

The field work of irrigation investigations for the past two years has been a hydrographic study of the valley of the Humboldt. The valley of the Humboldt River is divided into a number of distinct valleys by the river passing through various narrows or canyons. The principal valley studied thus far has been the Lovelock Valley, and the duty of water under the canals in the same. During the coming year automatic gage height recorders will be installed on the heads of the canals so that the work in the Lovelock can be continued without much additional cost and a study of the duty of water extended to the central or Battle Mountain Valley. In addition to the duty of water, evaporation measurements have been made from two places on the Humboldt by floating a type of wave-protected pan, one being located in the Lovelock Valley and the other at Winnemucca, Nevada.

AGRONOMY

The report for the year ending June 30, 1913, is largely a list of things started and results hoped for. When the writer took over the work at this Station, he was given full liberty to make what changes he deemed necessary and to attempt whatever new things he considered advisable. A few outstanding considerations governed the agronomist's work for the year, as shall here be outlined; and these considerations were as follows:

1. The importance of agronomy to this or any State called for more field experiments.
2. Field crop work being so new in Nevada and climatic and other conditions being so unusual, a series of variety tests might well become the foundation of the experimental work.
3. Agricultural areas being so widely separated, and the Experiment Station Farm being, as a consequence, comparatively isolated, it was thought well to institute a series of cooperative experiments as checks on the experiments carried on at the Station, and for the purpose of interesting individuals and localities more directly in the work being done at the Station.
4. While always advisable to secure the very best seed obtainable for

foundation stock, it was in addition advisable here to look toward obtaining the hardiest seed that could be found. The source of all the seed sown will be given in detail.

Soiling Crops

In addition to the variety tests just mentioned, the Department of Agronomy has sought to cooperate with the Department of Animal Husbandry in the matter of a series of soiling tests now under way. This is mentioned at this stage because it was the only work, aside from soil preparation, carried on following the harvest of 1912 (the result of the crop irrigation experiment will be given by the irrigation engineer). Two acres, Nos. 13 and 14, were sown to winter rye and hairy vetch (mixture) to grow early green feed for the cattle used in the soiling experiment. The seed was sown early in the fall and a fair growth of rye and vetch was secured before winter. During the winter most of the vetch that had germinated was killed back, but with the warmer weather this spring a strong growth began and we have had an early and abundant yield. Definite data will be given by the Animal Husbandry Department when the experiment is completed. We have cut the two acres over once and a second growth of over 18 inches stands on the strip first cut.

We are now starting to cut acre No. 29, first crop of alfalfa to carry on this soiling experiment. To follow this we have a small plot of mixed peas and oats, and to follow that we have another plot sown to common millet. To guard against lack of feed we have acres 15, 18, 19, 29, in alfalfa, which we can manipulate so as to secure an alfalfa ration when desired by those in charge of the feeding experiment. When 13 and 14 have been cut over once more we shall plow under any further growth and prepare these plots for variety tests of autumn-sown crops.

The Experimental Farm is laid out in divisions of one acre each, the irrigation ditches being run to conform with this arrangement. These acres have retained the same numbers for some years, and they will be referred to by these numbers as indicated on a chart of the farm.

No. 3—The sugar-beet industry is attracting a great deal of attention in Nevada, and as a consequence certain problems in the culture of sugar beets may well form a part of the work of the Station. At the suggestion of the agriculturist of the beet-sugar company at Fallon, we have undertaken an experiment to test the comparative effects of different dates of planting. Beginning on April 16 we have sown three rows to sugar beets each week, and we shall make our final seeding on July 2. Our rows are 30 inches apart and we are thinning to 1 foot apart on the row. Our plots are separated by 4-foot paths. The seed used to form the stock is from the stock sown by the patrons of the beet-sugar factory at Fallon.

No. 4—This acre was planted to corn last year. The physical condition of the soil left much to be desired. It has been sown to Marquis wheat, 75 pounds to the acre, and has been seeded down to Red clover. It is the intention to plow a crop of the clover under next year. At present there is a splendid stand of wheat and a first-class "take" of clover.

No. 6—Here we have twelve varieties of potatoes, three rows of each variety, planted in rows 3 feet apart, 5 feet between varieties. Following is a list of the varieties and the source of the seed:

Early Red, grown by C. Ross, Red Rock.

Peerless, grown by C. Ross, Red Rock.

Burbank, grown by C. Ross, Red Rock.
Great Divide, grown by J. Callahan, Washoe.
Early Ohio, purchased from St. Paul, Minn.
Irish Cobbler, purchased from St. Paul, Minn.
Rural New Yorker, purchased from St. Paul, Minn.
Carman No. 2, purchased from St. Paul, Minn.
Early Russet, purchased from St. Paul, Minn.
Netted Gem, purchased from St. Paul, Minn.
Improved Rose, purchased from Mitchell, South Dakota.
Gold Coin, purchased from Mitchell, South Dakota.

The potatoes were planted May 23 and are making a good showing, particularly the potatoes purchased locally. We aimed to get potatoes for seed that we were reasonably certain were free from the eelworm contamination.

No. 21—In this acre we have sown eighteen varieties of field roots—five of mangels, four of carrots, five of Swedes turnips or rutabagas, and four of cow or field turnips. The rows are 30 inches apart and we are thinning the mangels and turnips to 15–18 inches in the row and the carrots to 8–10 inches. The seed was purchased, with one exception, from Toronto, Canada. The varieties are as follows:

Mangels—Yellow Globe, Golden Tankard, Yellow Intermediate, Long Red, Royal Giant Sugar.

Carrots—Short White, White Belgian, White Vosges, Long Orange.

Swedes—Selected Purple Top, Canadian Gem, Jumbo, Hartley's Bronze Top, Kangaroo.

Field Turnips—Graystone, Flat Norfolk, White Globe, Cow Horn.

The one exception mentioned is the Tankard mangel, "Our Ideal," the seed of which was purchased from Waterloo, Ontario. This seed was grown at Waterloo; the other seed was presumably grown in Europe. In plot tests conducted at Ottawa, Canada, a year ago, the writer had the opportunity of trying out 282 strains of field roots, and the eighteen varieties being tried out at this Station were purchased on the results of those tests, being the most successful from point of yield, hardihood, and uniformity and trueness to type.

Field roots are comparatively new in Nevada and should form a welcome addition to the finishing ration for stock.

No. 12—Divided by paths running lengthwise and crosswise, this acre consists of thirty plots of one thirty-sixth of an acre each, of clovers, grasses, millets, etc. This acre is intended as a sort of demonstration area, although comparative yields from the plots should be recorded and suitability of crop and variety determined. The plots are sown as follows:

Clovers—Crimson, Common Red, Mammoth Red, Alsike, White.

Alfalfa—Ontario Variegated, Grimm, Turkestan, Nevada Dry Farm, Nevada Irrigated.

Grasses—Western Rye, Perennial Rye, Red Top, Canadian Blue, Timothy, Meadow Foxtail, Orchard, Awnless Brome, Meadow Fescue.

Millets—Golden, Siberian, Japanese, Hungarian, Common, Hog, Early Fortune.

Einkorn, Emmer (Spring), Spelt.

No. 17—In this acre we have, in rows five feet apart, sixty-six strains of alfalfa. Fifty-four of these were furnished us by the Department at Washington; the remaining fourteen are from individual plants, grow-

ing on the hills in the vicinity of Reno. These plants were selected for certain individual characteristics, now a matter of record, and with the idea of developing a hardy Nevada strain. The plants from some strains of seed are now about six inches high, while other strains are making a poor showing to date. It is the intention to maintain these rows of alfalfa for some time, for demonstration purposes, and to determine comparative suitability to Nevada conditions.

Nos. 20, 21, 22, 23—Last year the Station reported the results of a fourth-year experiment in the matter of different rates of irrigation. The experiment is being tried out once more this year on these four acres. The plots are one-fifth of an acre in area and consist of eight plots of American Banner oats and eight plots of Red Pife wheat. The seed for this experiment is northern grown and is pedigreed seed.

No. 24—It is quite a problem to grow corn, even for ensilage, in Nevada. Late spring frosts force late spring planting, and early autumn frosts necessitate early cutting. We have planted No. 24 to nine of the hardest varieties of Dent corn we could find, and the object is a comparative test as to earliness of maturity as well as to comparative yield. The corn is planted, six rows of each variety, in hills three feet apart each way. The varieties are as follows: Minnesota No. 13, Pride of Minnesota, Pride of the North, Sure Crop, Northwestern Dent, Minnesota King, Wisconsin Yellow Dent, Huron Dent, Improved Leaming.

No. 25—Here we have a duplication of varieties in No. 24, but we aim to be sparing in the matter of irrigation in this acre, with a view to a possible hastening of maturity and the production of more ears than generally falls to the lot of Nevada corn. This will embrace a comparison with No. 24 as to yield as well as to quality.

Fraction 2—This is a long narrow strip along the north fence and on this ground we have planted twenty strains of Soja beans. The question of the practicability of the manufacture of paint oil from this crop is a live one at present and by request we are trying out all available strains. Eighteen strains were sent us by a company interested in the matter; two were given us by Macdonald College, Quebec, Canada, as seed from the two best varieties grown there.

We have some odd areas, not numbered and not mentioned in the soiling experiment, and we might speak of these next.

(a) One and one-fifth acres south of the barn have been sown to Canada peas. It is the intention of the Animal Husbandry Department to conduct a test as to the value of these peas as a hog-finishing product. When the peas are about ripe the hogs will be turned into this plot and a definite test made as to gains made, comparative with some other regular method of fattening. Peas as a regular ration have won much favor in other States, and the results of this test should be of great interest to those of Nevada who grow their pork on alfalfa. It would seem that the discovery of some finishing ration that could be economically produced in Nevada is necessary if Nevada pork is to become a paying product for shipment.

(b) A somewhat irregular area of three acres, along the south fence, has been sown to Marquis wheat and Abundance oats. This area is newly planted pasture land and the object of the present crop is to secure clean seed for future experiments. The quality of the seed sown will be noticed in the following subdivision of the report.

Cooperative Experiments

This year we have several farmers cooperating with us in our variety tests. In this connection we have organized a tentative Experimental Union which we hope will grow in numbers and be the source of increased interest in the work of the Station. These farmers are trying out three varieties each of wheat, oats, barley, and peas, in plots of one-tenth acre in size. The Station is trying out the same varieties in duplicate. Following is a statement of the varieties now under test:

Wheat—Marquis, Red Fife, Defiance.

Oats—American Banner, Regenerated Abundance, Swedish Select.

Barley—Manchuria, Oderbrucker, New Zealand (2-rowed).

Peas—Golden Vine, Prussian Blue, Canadian Beauty.

The Marquis and Defiance wheats, Banner and Abundance oats and Manchuria barley came from Indian Head, Saskatchewan. The Marquis wheat is from the same stock that won two world's championships in the past two years. It is a dark amber, plump, and weighs 65 pounds to the bushel. The Red Fife is also an excellent sample. The Defiance was grown in the Dry Farm Station in Elko County and is from pedigreed stock. The Swedish Select oats and New Zealand barley comes from Montana Experiment Station. The Oderbrucker barley came from Wisconsin Station. The peas were grown by a specialist at Lindsay, Ontario, Canada. Every one of the twelve lots of seed is the product of years of selection, and our experimenters should grow something valuable from this seed.

The following are cooperating with us in the matter of these tests:

C. J. Henningsen, Gardnerville.

Andrew Martin, Reno.

Dr. P. B. Kennedy, Reno.

Charles Ross, Red Rock.

M. A. Laking, Reno.

H. J. Cazier, Wells.

J. H. Heward, Gerlach.

A. H. Sessions, Fort Bidwell, Cal.

C. L. Rowe, Lund.

H. F. Dangberg, Minden.

Modoc County Cooperative Association, Alturas, Cal.

Walfried Sohlman, Blaine.

Besides the tests embraced in this series we are having a number of other tests made by interested agriculturists:

(a) Charles Ross, Red Rock—Canada Yellow Flint corn.

(b) W. M. Snare, Reno—Canada Indian corn (the hardest flint of which the writer knows) grown by the Indians north of Montreal before Jacques Cartier's time. This is a twelve-row variety, the result of selection by Professor Klinck of Macdonald College.

(c) Theodore Clark, Reno—Wisconsin No. 12 Dent corn; Compton's Early corn; field mangels, three varieties.

(d) Lloyd B. Patrick, Reno—Field roots, 6 varieties.

(e) C. J. Cazier, Wells—Hardy alfalfa, 5 strains.

(f) George Henningsen, Gardnerville—Hardy alfalfa, seed from selected individual plants.

(g) Nevada Land and Livestock Co., Deeth—Grass tests: (1) western rye, (2) timothy and alsike, (3) comparative treatments of river-bottom meadows; Golden Tankard mangels, a stock-feeding experiment.

It is but fair to say of our experimenters that they met us more than half way. No member was secured by soliciting; they were all volunteers.

Suggestions

1. The Station Farm is badly overrun with weeds. I would suggest that next year about one-half of the farm be treated to a course of alternate irrigation and cultivation to sprout and destroy the weed seeds. This could be done and it would pay well ultimately.

2. As soon as possible the removal of inside fences should be completed and the roads graded up and proper culverts installed.

3. A separator outfit is needed if the purity of seed stock is to be maintained.

4. While the Station Farm should not be a show place, it should be an inspiration to visitors. The aim should be to keep it a little neater than the average farm. Sufficient labor should be provided for this purpose. It must not be forgotten that the necessity for irrigation at this Station entails at least one-third more labor than falls to the lot of stations subject to sufficient rainfall.

5. Extension work is seriously needed to connect up the work of the Station with the efforts of the people of the State. The work we have just begun has demonstrated clearly to us that the people are ready and willing, but that geographically they are hard to reach.

Germination Tests

During the past year we have done considerable seed testing at this Station. Our germinator has a capacity of over eighty samples in duplicate. Seed placed between sheets of blotting paper was laid in this germinator and sprouts counted at four, seven, ten, and fourteen days. We offered to test free all samples sent in from the growers and dealers of the State, and many of these took advantage of the offer. When a purity test was desired the samples were passed on to the Station Botanist, who kindly cooperated with us in the matter of informing the people as to the nature of the seed we were sowing. Some particular experiments in germination were carried on by a senior student, Mr. Mortimer Charles, and the following is an extract from his report. Owing to lack of space the long detail of the tests has been omitted:

Seed testing to the farmer and the seed merchant is an extremely important matter. Its object is that of supplying information regarding the quality of the seed, respecting its purity and vitality. On the vitality depends much; many millions of dollars are lost annually in labor by the farmers who carelessly sow seed of poor vitality, or containing considerable foreign matter, or guilty of both faults.

There have been many tests made; tests are old, but they have been unsystematic, made in boxes and contrivances of all kinds. Systematic germination tests are comparatively new.

The public, growers and dealers, have not had the opportunity of free government or state tests, and especially is this so in the western country.

There are many problems in seed testing unsolved; the field is open for extensive work, almost unlimited. The attempt in this thesis is to solve a few of these problems, contained in the following experiments:

I. To ascertain comparative germination of olive and brown seeds of alfalfa.

II. To ascertain comparative germinating power of olive and green seeds of alfalfa.

III. A comparative pot test as to the strength of first month's growth of plants from (a) olive and brown, (b) olive and green seeds of alfalfa.

IV. To ascertain the most favorable temperature for germination of oats, wheat barley, alfalfa, and clover.

- V. To ascertain the vitality of commercial seed bought in Nevada.
- VI. Germinating strength of frosted seeds.

COMMENT

Our experiments described in Divisions I and II show that a germinator test will show little difference in the number of sprouts between normal alfalfa seed and that which was styled abnormal—the brown or green seed. The sprouts from many of these so-called abnormal seeds were weak. The third test showed that these weak sprouts would seldom develop into plants, even under the most favorable conditions. The brown seeds came from places where seeds were raised under irrigation and where it was said the frosts were to blame. Probably too much water was used and the plants were too late starting to mature their seed. The brown seed was taken from samples grown under dry-farming conditions, and perhaps the lack of maturity was due to cutting too early. Be the reasons what they may, the fact remains that the presence of either brown or green seeds lessens the value of a seed from a commercial standpoint.

II. Our many tests of western-grown alfalfa seed have shown that in practically all samples there is quite a large percentage of hard seeds that will not germinate in even twenty-eight days. Dry-farm alfalfa seed contains a larger percentage of hard seeds. Perhaps they will germinate in the soil in the course of time.

III. Within reason, temperature does not affect the percentage of germination. High temperature does favor the formation of molds; the spores are on the seed; their growth hinders germination; therefore the higher temperature does not suit old or damaged seed so well. Probably some kinds of seeds do best under rather cool conditions, while others act the opposite. About 20 degrees C. seems to suit most kinds of seed; this is about the ordinary house temperature.

IV. Seeds bought and sold in Nevada have a good deal to be desired. Our native seed germinated well; seed imported into Nevada is sometimes very poor. The Experiment Station, by offering to test seed for farmers, offers a protection that should be taken advantage of. Who for a difference of 20 cents per acre would take chances on the yield of a field?

V. Our tests in Division VI go to show that the frosted grain is low in germination, and that it is an important matter to mature seeds without the injury by frost.

SOIL INVESTIGATIONS

As far as the writer is aware, this report initiates a new series here, and, since no precedent exists, he purposes to review and interpret the data obtained in considerable detail. In appreciation of the fact that the practical applications of results secured in scientific laboratories are of primary interest to the general agriculturist, he has endeavored to read into the discussions practical interpretations.

Owing to unavoidable delays, operations in this laboratory were postponed until December 30, 1912. The five and one-half months elapsing between that date and June 15, 1913, is the working period covered by this report. The data accumulated during this brief time must of necessity be meager and incomplete, and conclusions drawn therefrom venturesome and inadequate. Indeed, the author reserves the privilege of changing any expressed opinion if subsequent data indicates the contrary.

The aims of the soil laboratory have been two-fold. One object has been to meet the immediate demand for analytical soil work. A considerable number of soil samples have been received from farmers and prospective settlers. The examination of these samples has occupied the writer's attention at least 25 per cent of the time, and has led to soil knowledge of interest and value to farmers and to the State. The second purpose has been to pursue investigational work, pertinent to local problems, but primarily intended to advance the scope of knowledge concerning soils and their functions.

Since the work of this laboratory has developed into two separate lines, it seems advisable to outline the report pertaining thereto in two distinct divisions. The first division is devoted to the results and conclusions of the routine work, and popularly discusses Nevada soils in relation to fertility and crop production. The second part of this paper reports the status of the scientific investigations undertaken.

PART I

Soil Examination

The crop-producing power of a soil is the resultant of many forces; warmth, moisture, congenial physical condition, and available plant food are soil properties promoting superior plant growth. On the other hand, alkali salts, excess water, "baking" properties in clay soils, poor cultivation and lack of plant food seriously hinder the growth of plants. Other factors affecting the profit of the crop and consequently the value of the land are the source, quantity, and quality of irrigation water, the climate, length of growing season, and the distance to railroad transportation and markets. Before discrediting the soil the farmer should ascertain the facts concerning the quality of the seed used, the fitness of the variety for the climatic conditions, and make sure that weeds, fungi, and other pests are not extracting the profits. Thus many of the factors of crop production are purely local and can be best observed by the farmer on the ground.

Those factors of crop production relating to soils, either from a physical, chemical, or biological standpoint, are to be taken up in this laboratory. Up to this time little or no attention has been directed to the physical and biological characteristics of the soil samples sent in by farmers. This omission is due to the fact that our laboratory space, equipment, and assistance are not sufficient to allow of this work. On the other hand, some of the chemical features, as the quantity of plant food and the presence of alkali, are determined. The reports sent back to the farmer cover these points and general remarks are made as to the fitness of certain crops to the soil, and appropriate methods of cultivation and fertilization are discussed. These remarks will serve as an introduction to the following table, which takes up in detail the analyses of samples of soil sent in by farmers. As far as possible the soils have been arranged into groups representative of soil types or regional districts. A discussion follows the table:

TABLE I

Locality	Plant foods				Alkali salts		
	Phosphorus (P)	Potassium (K)	Calcium (Ca)	Magnesium (Mg)	Black alkali (NaCO ₃)	Common salt (NaCl)	Glauber's salt (Na ₂ SO ₄)
Humboldt Valley					2,400	6,400	
Humboldt Valley					800	5,600	3,600
Humboldt Valley	5,200		192,000	56,000	1,600	2,400	1,600
Humboldt Valley	3,200		100,000	28,000	1,200	1,200	4,800
Humboldt Valley	4,400		175,000	40,000	2,000	4,000	2,000
Ripley					400	11,200	40,000
Ripley					400	400	4,800
Smith Valley	3,600		46,800	28,000			
Smith Valley	4,800		60,000	19,600			
Tonopah	3,040	82,000	84,000				
Tonopah	2,320	82,400	76,000				
Smoky Valley	4,000	104,000	58,000	24,000	1,200		
Smoky Valley	4,000	116,000	55,000	20,000	1,600	400	
Smoky Valley	4,000	104,000	152,000	25,200	8,000	12,000	2,800
Smoky Valley	4,000	164,000	72,000	36,000	2,400	800	
Smoky Valley	3,200		80,800	30,400	3,200	400	
Pahrump Valley					600	4,800	2,000
Pahrump Valley					600	4,000	16,000
Pahrump Valley					1,000		2,800
Pahrump Valley					800	12,000	38,000
Stewart					28,000	43,200	52,000
Springdale					2,520	320	800
Beatty					12,800	2,400	
Beatty					12,800	4,400	
Pioneer	1,600	100,000	112,000	20,000	1,040	440	
Battle Mountain					400	22,800	
Battle Mountain					400	30,800	
Gardnerville	19,200	56,000	114,000	82,000	1,600	5,700	320
Goldfield	7,200	192,000	78,000	48,000	2,400	4,000	
Las Vegas					2,120	11,600	66,000
Las Vegas					1,800	31,200	138,000
Las Vegas					5,600	62,000	3,760
Las Vegas					3,200	14,400	62,800
Las Vegas					5,200	56,000	1,200
Las Vegas*			^b 56.67%	^b 15.27%			
Pyramid					2,000	23,200	3,800
Pyramid					2,000	4,800	400
Pyramid					2,500	25,000	5,600
Pyramid Lake Water (reported as lbs. per acre-ft. of water)					2,883	8,519	1,697
Carson Valley					1,200	900	
Carson Valley					1,200	700	
Carson Valley					1,300	1,700	
Carson Valley					1,100	700	
Carson Valley					1,600	450	
Carson Valley					3,200	2,500	
Carson Valley					2,200	450	
Carson Valley					2,500	1,100	
Carson Val. (surface scrapings)					28,000	2,500	
Carson Valley					800		
Carson Valley					1,600		
Locality unknown	4,800		90,000	88,000	43,200	132,000	3,200
Locality unknown	3,800	39,000	90,000				

*Sample of limestone from Las Vegas. ^bCalculated as CaCO₃ and MgCO₃.

To date fifty-two samples of soils and water have been analyzed either for alkali salts or plant foods. Seven other samples have been received and reported upon without a chemical analysis. Four other samples have been sent in within the last day, bringing the total number to sixty-three for a period of five and a half months.

The greatest difficulty in drawing conclusions from these analyses lies in the uncertain and haphazard way in which they are often collected. However, a few facts of interest may be gleaned by a study of the figures given.

Plant Foods—Plants must have foods no less than animals. It is essential that certain elements be at their disposal in an available condition. Of these elements potassium, calcium, magnesium, iron, phos-

phorus, and sulphur are termed collectively the mineral requirements of plants and are derived solely from the soil. The soil also furnishes nitrogen to most plants excepting the legumes, but more concerning this a little later. As to the carbon, hydrogen, and oxygen of which plant tissues are largely constructed, it will suffice to say that these elements are secured from the air and soil moisture, and owing to natural cycles are abundantly supplied in the role of plant food. Still other elements are frequently taken up by plants, but, with the possible exception of chlorine, appear to be of no particular use to the plant.

The immediate agricultural practices have limited the demand and sale of plant-food elements to potassium, phosphorus, nitrogen, and occasionally calcium (lime). The fertilizer goods sold in the market are not elementary forms but various chemical combinations of plant foods and other substances. Undoubtedly the list of fertilizer materials will soon be extended in the future to include elements not actually used as plant food, but which indirectly seem to favor plant growth. Even now, advertisements of manganese in various forms as a fertilizer are appearing. Nevertheless our interest is chiefly concerned with potassium, phosphorus, calcium, and nitrogen.

These elements probably exist in the soil in three conditions—the reserve supply untouched by the immediate crop, the partially weathered state, useful to a certain extent, and the more highly soluble compounds which go to supply the crop's immediate demand for plant food. The line of demarcation between these divisions is not definite and they are adopted largely as explanatory measures. The total plant food is the entire quantity found in the soil irrespective of its availability.

The columns headed phosphorus, potassium, calcium and magnesium record the total amounts in pounds per acre-foot of these elements in some Nevada soils. (An acre-foot of sandy soil weighs about 4,000,000 pounds, loam soils 3,500,000, and clay soils 3,250,000 pounds.) The value of this method of expression is realized when it is known that a fifty-bushel crop of wheat removes 96 pounds of nitrogen, 16 pounds of phosphorus, and 58 pounds of potassium from the soil. To illustrate that different crops have different requirements, compare alfalfa, removing in an eight-ton crop, 400 pounds of nitrogen (to be discussed later) 36 pounds of phosphorus, and 192 pounds of potassium, with the food requirements of wheat. To be sure, these figures are based on large crops, improbable under many conditions, but by no means impossible.

Phosphorus commands a position second in importance to nitrogen in the practical economy of crop production. As to the supply of this element in Nevada soils, Table I indicates that there is an abundance. The least quantity contained in any of the soils examined is 1,600 pounds per acre-foot and the highest 19,200 pounds. Excluding these extremes the average is 4,070 pounds per acre-foot—sufficient to produce 254 fifty-bushel wheat crops, and 113 eight-ton alfalfa yields, provided the plants withdraw no phosphorus from the deeper strata of the soil.

It must be remembered that most of the phosphorus is in an insoluble form and of little use to plants. Indeed, only 1 per cent or less of the total phosphorus is likely to be available for plants. Each year the weathering processes, including the action of thermal changes, the solvent power of water, carbonated waters, and organic acids, and the indirect effects of biological agencies, liberate a small percentage of phosphorus, making it available to plants. Just how rapidly this takes place is not known,

but that the rate of change from the insoluble to the soluble may be extensively controlled by the farmer is a well-established fact. Good farming consist of regulating the soil functions so as to constantly supply plant food in appropriate amounts and without waste.

How is this accomplished? In the first place cultivation aerates the soil, brings about better conditions for oxidation and other bacterial process, and consequently hastens the step toward availability. Green cover-crops, barnyard manure, and similar organic matter, plowed into the average Nevada soil would react favorably in increasing the usable plant food at the disposal of the plant. Soil mulching, preventing evaporation and retaining the soil moisture, assists to convert the insoluble supply of plant food into forms suitable for the present crop. Irrigation has the same tendency. Lime and gypsum operate in the same manner; however, Nevada soils (from the few I have examined) are well stocked in calcium carbonate, and will need no applications of this material for some time. The use of gypsum, except to correct black alkali, should be limited to a few hundred pounds per acre, for it is a soil stimulant and is apt to free plant food more rapidly than the plant can utilize it. Thus by cultivation, irrigation, green cover-cropping, and liming (where necessary), the farmer is able to draw upon the storage reservoir of plant food as needed for crop production.

We hear a great deal about soils becoming worn out. In many cases the soils still have ample plant food, but in a condition unfit for assimilation. The soil needs no replenishing, but needs green cover-cropping and cultivation, to increase the rate of availability, liberating plant food from the reserve store in sufficient quantity each year to supply the crop's demand.

Averaging the column headed "potassium" we find that the Nevada soils examined contain 111,150 pounds of this element per acre-foot. If the crops secure their required quantity of this element from the first foot alone, there is an ample supply for 1,000 crops of wheat, or nearly 500 crops of alfalfa. The same argument may be applied to potassium as to phosphorus; the soil has an abundant supply locked up but ready to be unlocked by cultivation, green cover-cropping, and irrigation. A few of the soils built up by the residue left by decaying organic matter, as old peat or tule beds, may be deficient in potassium, but unfortunately no samples representative of this class of soils as found in Nevada have been submitted.

The supply of calcium averages 96,700 pounds per acre-foot in the soils examined—indeed, an enormous quantity capable of supplying the demands of crops for a longer period than either the phosphorus or potassium supply. In many of the soils a considerable quantity of the calcium exists as calcium carbonate or limestone, which speaks well for the fertility of Nevada soils. Perhaps soils of a low, marshy nature, instanced by many situations in Washoe Valley, could be converted from natural pastures into alfalfa fields through drainage and liming. Soils of this character are very apt to be acid, and the lime applied corrects this harmful condition.

Since crops require small amounts of magnesium, iron and sulphur, and since these elements are generally present in soils in relatively large quantities, they may be dismissed without further thought at this time.

The keynote to permanent and profitable agriculture in Nevada lies in building up the nitrogen content of its soils. As in most arid regions,

the level plains and wide valleys of this State, lying exposed to the brilliant sun, have become deficient in nitrogen and organic matter. Evidently those methods of farming which return nitrogen to the soil should be practiced. Green cover-crops should be grown where feasible. Alfalfa and legumes generally should be adopted as standard crops and should hold a prominent place in crop rotations. As far as possible it is advisable to produce live stock upon the farm and return the manure to the soil.

In my brief visits to the country I have observed large heaps of manure around the stock-feeding corrals wasting in the open. All of this should be conserved in proper composts or applied to the soil shortly after its production.

Alfalfa, cow peas, clovers, and other plants of the legume family are enabled through the activity of certain micro-organisms of obtaining a portion or perhaps all of their supply of nitrogen from the air. The importance of this is evident when it is realized that nitrogen is the most costly element of plant or animal foods, and to secure it from the inexhaustible store in the atmosphere is indeed a money-saving and conservative process. For this reason, other factors being equal, it is advisable to grow legumes as frequently as possible.

A word or two concerning legume inoculation might not be out of place here. Nevada is particularly fortunate in having a large number of species of legumes in its natural vegetation. This fact possibly accounts for the nodule-forming bacteria in soils not previously inoculated nor used for the production of the domesticated legumes. As to what extent the organisms of the natural legumes can thrive upon the tame varieties is not definitely known. However, where alfalfa or other leguminous crops fail to show the characteristic root nodules, inoculation should be practiced. Either obtain soil from a field known to contain the nodule organism and broadcast over the new field at the rate of 200 pounds per acre, or secure pure cultures of the appropriate bacteria from reliable dealers. The first method is apt to introduce weed seeds, animal and vegetable parasites and nonvirulent organisms. If the culture is secured from unreliable sources, or if the directions are not strictly adhered to, the second method may prove a failure.

There are organisms in the soil which are potential factors in supplying the plant with necessary food. Some of these are bacteria capable of adding nitrogen to the soil without growing upon the roots of plants. The two or three Nevada soils examined failed to show the presence of this beneficial microscopic resident of the soil. Other soils will be examined with respect to this feature in the near future. Bacterial processes in the soil are also responsible for nitrates, probably the form of nitrogen most readily taken up by plants. Bacteria play an essential part in preparing the mineral food for plants. On the whole, the bacterial flora of the soil may be regarded as a factor of crop production equally as important as the chemical or physical constitution of soils.

One feature of Nevada soils to which particular attention should be directed is the alkali content. A glance at the columns in Table I headed "Alkali" shows the presence of various amounts of these substances in almost all of the soils examined. A great many soils in Nevada, apparently of high fertility, are rendered sterile by this subtle foe of crop production. If a soil is impregnated to the extent of 4,000 pounds of black alkali to the acre-foot, 10,000 pounds of common salt, or 20,000 to 30,000

pounds, or even more, of sodium sulphate, crop production is very apt to be unprofitable. Soils containing black alkali can often be remedied by applications of gypsum. However, drainage is the ultimate means of reclamation, if the salts are present in excessive quantities. The so-called principles of dry farming should be closely followed under any circumstances, but particularly if alkali salts are present. Mulching, surface cultivation, and shading, preventing surface evaporation and consequent accumulation of alkali salts upon the surface, are practices quite essential to follow in handling lands known to be impregnated with alkali.

As to the physical properties of Nevada soils, it may be said that they are generally in good workable condition. Those in the open valleys are inclined to be sandy with an admixture of river silt, and will be largely benefited by plowing under green cover-crops, the organic matter of which will greatly increase the water-holding capacity of the soil. The matter of green cover-cropping deserves thorough investigation, first, to determine the better crops to use, and, second, to obtain the desirable and necessary information regarding the decomposition of the organic matter in relation to the water supply. This latter thought is particularly pertinent to the so-called dry farming.

As to a general résumé, it may be said that Nevada soils are intrinsically rich in mineral plant food, and naturally deficient in nitrogen. Doubtless this condition is the result of the natural forces responsible for the formation of these soils and the environment under which they have existed.

By increasing the store of nitrogen through legume cropping or applications of nitrogenous fertilizers, a soil well balanced with respect to plant foods will result. With this in view Nevada soils will undoubtedly prove a wealth of productiveness.

PART II

Investigations Looking to Soil Improvement

As previously mentioned the lack of nitrogen in soils is often the chief limiting factor in crop production. This seems particularly true of the arid regions of the world. Consequently any information relating to nitrogen and its accumulations in soils, and pertaining to any means of obtaining this element in forms suitable for agriculture, from the abundant supply in the atmosphere, seems to be desirable. Upon the appearance of Headden and Sackett's papers describing and discussing the nitrate accumulations in certain Colorado soils, it occurred to the writer that if the natural biological agencies at work in these instances might be controlled, it might possibly lead to methods of fixing nitrogen for commercial purposes from the air. (I might say that I do not agree with all the views stated in the above papers, but accept the facts as presented and assume for sake of further experiment that the nitrates are actually the results of bacterial fixation of nitrogen—an explanation brought forward, but, to my mind, unproven as yet.) Accordingly "The Biological Fixation of Nitrogen for Agricultural Purposes" was presented as Project No. 1 under the Adams Fund, and which met the approval of the Director of the Office of Experiment Stations, February 17, 1913.

BIOLOGICAL FIXATION OF NITROGEN

Work upon this project has progressed slowly. Our equipment does not permit of the nitrogen determinations so essential, and the lack of a

pressure filter pump is deplorable. At the time of proposing this project, the use of specially designed apparatus in which to cultivate the organisms was contemplated, but we have been unable to obtain this apparatus.

The first experimental series under this project were carried out in liquid cultures in 250 cc. Erlenmeyer flasks; 50 cc. of a 2% mannite solution, containing in addition 0.2 gm. K_2HPO_4 , 0.2 gm. $MgSO_4$, .02 gm. $CaCl_2$, and one drop of a 10% solution of Fe_2Cl_6 , were placed in the flasks and sterilized. These were then inoculated with pure cultures of Azotobacter organisms, kindly sent me by Professor Sackett of the University of Colorado. A week or ten days later each of the flasks was inoculated with a pure culture of an ammonifying organism and a comparatively pure culture of nitrifying organisms¹. After the lapse of a month or more, qualitative tests proved the presence of nitrates in some of the flasks. Upon the addition of a small quantity of $CaCO_3$ to the flasks, the nitrate content seemed to increase. With this work as a crude preliminary experiment other series were started. Sand washed free from dust with tap water was then employed as a medium in which to grow the organisms. One hundred grams of this sand was weighed into tumblers and a gram of $CaCO_3$ added to each tumbler and the whole sterilized; 15 cc. of sterile mannite solution was then introduced. The sand was then inoculated with pure culture Azotobacter organisms. A week later ammonifying and nitrifying organisms were also added. The tumblers were incubated at 30°C. for thirty-two days, meanwhile maintaining the water content of the soil constant by additions of sterile distilled water every five days. At the end of this time the nitrate content of the sand was determined.

The results of this series would lead one to believe that nitrogen fixation, ammonification, and nitrification could not proceed in the usual order upon an identical atom of nitrogen. Two different Azotobacter organisms, and four different species of ammonifying organisms, as well as the nitrifying organisms, were tried in various combinations. No more than one species of each type of organism was introduced into a single tumbler. It might be added that the nitrifying organisms were obtained in a comparatively pure condition by transferring several times into inorganic media. One set of duplicates gave positive qualitative tests for nitrates with diphenylamine and sulphuric acid and traces with the phenoldisulphonic acid method. In these particular tumblers a nonpigment-producing Azotobacter organism, *Bacillus coli*, and the nitrifying organism were present. These bacteria were added by means of suspensions in water, thus avoiding the error of introducing sufficient organic matter to vitiate the results. Though the findings of this series did not corroborate the original theory, yet traces of nitrates were found in tumblers which had been inoculated with Azotobacter No. 1, *Bacillus coli*, and the nitrifying organisms. This gives evidence that if the proper combination of organisms and stimuli be present, considerable quantities of nitrates might be recovered from the media.

A third series was undertaken in which sterile soil containing 2% of mannite and 2% of $CaCO_3$ was used as the medium of growth. Unfortunately the total nitrogen could not be ascertained in this experiment

¹The writer is indebted to Professor Peter Frandsen of this University for the pure cultures of ammonifying bacteria used in these experiments. *Bacillus Niger* is a new species of bacteria isolated and named in Professor Frandsen's laboratory.

either before or after the nitrates were determined, consequently the data presented is solely in reference to nitrates and appears in Table II:

TABLE II

Soil	Mannite	Calcium carbonate	Inoculation ¹	Nitrates
100 gr.	2 gr.	2 gr.	Azoto. No. 1— <i>B. pyocyaneus</i>....	.60 mg.
100 gr.	2 gr.	2 gr.	Azoto. No. 1— <i>B. niger</i>	Trace
100 gr.	2 gr.	2 gr.	Azoto. No. 2— <i>B. pyocyaneus</i>	1.35 mg.
100 gr.	2 gr.	2 gr.	Azoto. No. 2— <i>B. niger</i>.....	.66 mg.
100 gr. (sterile blank)....	.....	.....	.....	.63 mg.

¹In addition to the organisms mentioned above, nitrifying bacteria were also introduced into the soil in all the tumblers.

We can draw no conclusions relative to nitrogen fixation and subsequent alteration into nitrates from this series. We can, however, see the immense advantages of having pure cultures of the proper type in the soil, for the second combination seems to remove all the nitrates, while the third combination doubles the nitrate content of the soil. The additional nitrates may have been derived from the organic matter of the soil or may be the result of subsequent ammonification and nitrification of *Azotobacter* cells, but this is pure speculation. This series indicates the possibilities of soil sterilization and inoculation.

A fourth series carried on in Erlenmeyer flasks containing sand and mannite gave evidence that the ammonifying and nitrifying organisms could remain alive in the media suitable for *Azotobacter* development and which contained *Azotobacter* cells and their life products. The two *Azotobacter* species were employed in various single combinations with *Bacillus proteus vulgaris*, *B. niger*, *B. pyocyaneus*, *B. subtilis* and an ammonifying organism No. 11 secured from hot-house soil. In addition to these organisms, nitrifying bacteria were also included. Sterile tubes of peptone and NH_4SO_4 solutions were inoculated from the flasks after thirty days' incubation. In the course of a few days the peptone tubes all showed the presence of the characteristic ammonifying organism used. The NH_4SO_4 was oxidized to nitrates in all but two tubes. This at once indicates the peculiar relationship between species of bacteria. Apparently nitrifying organisms could not live in the presence of *Azotobacter* No. 2 and *Bacillus pyocyaneus* or *B. proteus vulgaris*, yet they lived in combinations of the latter with *Azotobacter* No. 1. Possibly one species of bacteria may be excluded from the media by toxic substances formed in the process of metabolism of other organisms. Only in one flask and its duplicate are nitrates formed, and in that case the nitrifying organisms were absent.

The evidence at hand does not warrant definite conclusions, but on the whole is rather favorable to the explanation of the accumulation of nitrates in Colorado soils, as offered by Headen and Sackett. Though only in a few instances are nitrates formed, yet surely from the innumerable combinations possible of the various organisms which are concerned in the processes of nitrogen fixation, ammonification and nitrification, one or more combinations will surely yield nitrates. Our object is to find organisms capable of growing together, and which produce sufficient nitrates to be of consequence. In addition to the above-mentioned types of organisms, it will be essential to introduce *algæ* to furnish the energy

necessary for the fixation of nitrogen. It may be necessary to employ some agent, either chemical or biological, to destroy the *Azotobacter* cells as rapidly as they begin to deteriorate. This factor must be of a peculiar nature, active only toward old disintegrated cells of *Azotobacter*, harmless to the young thriving cells, and neutral or stimulative toward the ammonifying and nitrifying organisms. This work should be continued under a variety of conditions. Though it should answer the original query in the negative, yet it leads into the important field of pure cultures in relation to soil fertility.

BACTERIA IN SOILS AFFECTED BY IRRIGATION

Project 2, entitled "A Study of the Bacterial Flora and Activity in Soils as Affected by Irrigation," was approved at the same time as Project 1. The studies contemplated under Project 2, including tumbler, pot, and field experiments, are of particular interest and application to this State where irrigation is practiced so widely.

That plants are apt to turn yellow and lose their vigor if too much water is applied to the surface of the soil is a matter of common observation. We have noticed this yellowing particularly in the case of Lima beans and allied legumes. It rarely seems to occur except where thin layers of water cover the soil for several days or fine silt is deposited over the entire surface. Often the yellow color and sickly condition persists through the entire season, though no further irrigation may be practiced, and the soil becomes sufficiently dry to warrant the plant's recovery, if the diseased condition is due to the direct effects of a temporary submergence. That alterations in the bacterial flora and activity may be responsible for the unfavorable conditions existing under the circumstances mentioned, is a possibility worthy of consideration. It appears of particular interest in this connection to observe acid production as well as nitrogen fixation, ammonification and nitrification as affected by the various modes of irrigation.

The work up to date on this problem has been carried out in soils in tumblers, and the results relative to acid production obtained have been unsatisfactory, owing largely to the discrepancy between duplicates. The source of error lies in the difficulty of obtaining clear filtrates of water extractions of the soils of this region. The fine silts and organic and clay colloids prohibit the use of the usual paper filters for clearing the solution. A pressure filter pump equipped with Pasteur filters would overcome this difficulty. However, the few approximate results secured indicate that soils supplied with excess moisture (judged by the physical conditions of the soil, and in this case about 27 per cent upon an air-dry basis) rapidly became acid if fertilized with dried blood. Surprisingly enough, soils treated with dextrose, instead of blood, showed but very little acid after three weeks' incubation at 30°C., even with 30 per cent of water. With a filter pump and a few of the details worked out, this work could be prosecuted with considerable rapidity.

Since the soil used in these experiments was obtained from the University farm, it seems of interest to add the results of experiments illustrating the optimum moisture condition for ammonification and nitrification. One hundred grams of air-dried soil was weighed into tumblers and 2 grams of blood added. Various percentages of sterile water were added, the mass thoroughly stirred and incubated at 30°C.

for four days in the case of ammonification, and for three weeks where nitrification was the object. Ammonia was determined by direct distillation from the soil with magnesia, catching the ammonia in standard acid and titrating the excess acid with N-10 ammonia. The nitrates were determined in the soil extract by means of the phenoldisulphonic acid method. The results appear in the following table:

TABLE III

No.	Water, per cent	N-10 ammonia produced	Nitrates formed
1.....	16	56.35	.0084 mgrs.
2.....	19	61.80	.0086 mgrs.
3.....	22	67.20	.0071 mgrs.
4.....	25	79.70	.0087 mgrs.
5.....	28	68.00	.0020 mgrs.

From this table it is quite evident that a water content most suitable for ammonification is not the optimum condition for nitrification. Ammonification proceeds most rapidly at the water content of 25%, and is not markedly affected by differences of 3% in water. On the other hand 19% of water is most advantageous for nitrification, and the rate of nitrification decreases over 50% as the water content increases to 25%. From these figures it is probable that 18% to 20% of water is the most suitable water content for this soil, at least for the bacterial processes taking place in it.

Colloids as Protective Substances for Bacteria

This problem was undertaken independent of special funds, and received considerable attention owing to the fact that the laboratory equipment was better adapted to its prosecution than to the work involved in the Adams Fund projects.

Some previous work relative to the absorption of nitrates by colloidal materials led the author to think that colloids, by absorbing toxic substances and removing them from the sphere of action, might possibly prove protective toward living organisms. It was thought at the time that introducing colloids into soils impregnated with toxic alkali salts might alleviate the condition sufficiently to permit of bacterial action and plant growth.

Up to the present time only $\text{Al}_2(\text{OH})_3$ and $\text{Fe}_2(\text{OH})_3$ have been employed as colloids. However, it is the intention to use organic as well as inorganic colloids as the work progresses. The aluminum hydrate was precipitated by NH_4OH from a solution of potassium alum, and then washed with hot water forty or fifty times, or until practically free of sulphates and ammonia. The mass of precipitate was then transferred to a bottle and water added until a suspension capable of being handled with a pipette resulted.

The first experiment was carried out in a solution of peptone in 250 cc. Erlenmeyer flasks. To these flasks various amounts of a salt solution were added introducing the toxic element. A known amount of $\text{Al}_2(\text{OH})_3$ suspension was added to half the flasks by means of a pipette. Sufficient distilled water was also added to the flasks to make the volume equal in all cases. The flasks were then sterilized, cooled, and inoculated with 5 cc. of a soil infusion. After four days' incubation the ammonia formed was distilled off, caught and titrated in the usual manner. The results are given in Table IV, and represent the averages of duplicate series which gave concordant results:

TABLE IV

No.	Media	Salt	Al ₂ (OH) ₃	A N-10 ammonia (ammonia produced)	B Ammonia produced
1	50 cc. of 2% peptone	0	14.75 gra.	52.90	50.55
2	50 cc. of 2% peptone	*1	14.75 gra.	52.65	52.10
3	50 cc. of 2% peptone	3	14.75 gra.	52.45	51.30
4	50 cc. of 2% peptone	6	14.75 gra.	53.75	49.10
5	50 cc. of 2% peptone	10	14.75 gra.	47.50	47.20
6	50 cc. of 2% peptone	15	14.75 gra.	45.10	40.25
7	50 cc. of 2% peptone	20	14.75 gra.	43.55	28.90
8	50 cc. of 2% peptone	25	14.75 gra.	30.75	23.00
9	50 cc. of 2% peptone	30	14.75 gra.	19.65	25.40

*CC. of bimolecular NaCl solution.

In column A the figures presented represent the N-10 normal ammonia produced by the organisms in the presence of 14.75 grams (wet weight) of Al₂(OH)₃. The results in column B were obtained from a series of flasks from which the Al₂(OH)₃ was omitted, but which were exactly similar in all other respects to the flasks giving column A. Upon comparing the two columns it will be observed that they are practically similar within the limits of error down to No. 6, containing 15 cc. of a bimolecular NaCl solution. At this point the organisms formed 5 cc. more of ammonia in the flask containing Al₂(OH)₃ than in the flask not containing it. In flask No. 7 we see a still wider difference amounting to 14.65 cc. of N-10 NH₄OH, or the organisms prospered 33 $\frac{1}{3}$ % better in the presence of Al₂(OH)₃ than in its absence. With 25 cc. of the salt solution (see No. 8) the Al₂(OH)₃ still seemed to exert a beneficial influence in behalf of the organisms. With still more salt, however, the flasks containing the Al₂(OH)₃ were less favorable. I might add that 14.75 grams of Al₂(OH)₃ in the wet colloid state actually carried .623 grams of Al₂(OH)₃.

A second series, substituting Na₂SO₄ for NaCl was also run, with the following results:

TABLE V

No.	Media	Salt	Al ₂ (OH) ₃	A N-10 NH ₄ OH produced	B N-10 NH ₄ OH produced
1	50 cc. of 2% peptone	0	20 cc.	48.95	46.40
2	50 cc. of 2% peptone	*5	20 cc.	50.90	48.25
3	50 cc. of 2% peptone	10	20 cc.	48.25	38.30
4	50 cc. of 2% peptone	15	20 cc.	45.25	36.05
5	50 cc. of 2% peptone	20	20 cc.	27.50	24.85
6	50 cc. of 2% peptone	25	20 cc.	27.95	24.70
7	50 cc. of 2% peptone	30	20 cc.	18.20	22.50

*CC. of a bimolecular Na₂SO₄ solution.

In this case the Al₂(OH)₃ was added from a suspension by means of a pipette and 20 cc. of the suspension contained .380 grams of Al₂(OH)₃.

A study of this table reveals about the same condition as existed in the NaCl series. It is certain that Al₂(OH)₃ renders NaCl and Na₂SO₄ in solution at certain concentrations less toxic.

As to the mechanics of the protective action, I am inclined to believe that these salts are absorbed or adsorbed by the colloid and that in this state they are less injurious. I do not consider Al₂(OH)₃ in the light of a stimulant, for the mere presence of that body seems to have little or no effect when an infusion containing a large variety of organisms is used as an inoculum.

Other possible conditions, as increased surface, the absorption of food or toxic metabolic products, or the presence of soluble aluminum in some form, might have some influence upon the activity of the organisms, but the data at hand justifies no definite conclusions.

This protective action of colloids seems of considerable significance in relation to alkali soils. Soils containing large quantities of organic matter, more or less colloidal in nature, should present a more congenial habitat for organisms than a soil with less colloidal matter, though the soils be impregnated equally with alkali. The more favorable condition in this case omits reference to increased food supply, better temperature and moisture conditions, and the other considerations all potent in facilitating bacterial action, but adds another factor, the absorption of harmful substances, which brings about an improved environment.

The effect of $Al_2(OH)_3$ in combination with common salt upon pure cultures of ammonifying organisms was also studied. These experiments were carried out in the same manner as the two series previously discussed. Strikingly enough, the $Al_2(OH)_3$ proved to be toxic to the organisms in pure culture, and little or no ammonia was produced even when the flasks contained as low as .380 grams of $Al_2(OH)_3$. Mixed cultures are evidently enabled to withstand adverse conditions, at least in this instance, much better than pure cultures. Perhaps a single organism in the mixture was highly resistant toward $Al_2(OH)_3$ and accomplished the ammonification measured. However, I am inclined to favor the idea that the life products of some of the organisms either tend to keep the aluminum precipitated or render it harmless through other chemical reactions. Neither *Bacillus pyocyaneus* or *B. niger* were capable of producing more than traces of ammonia from peptone in the presence of $Al_2(OH)_3$.

A colloidal preparation of starch was also employed as a possible means of overcoming the toxic properties of salts in solutions. No very promising results, either negative or positive, have been secured. It must be remembered that only those organisms which do not produce starch-liquifying enzymes are properly eligible for this test. *Bacillus pyocyaneus* belongs to this class and will be worked with in the near future. Starch in colloidal condition seems to lower the ammonifying power of organisms. There is no sudden drop in the efficiency of the organisms as is often shown when toxic substances are added to the media, but a mild and constant suppression is exhibited. Eight pure cultures of ammonifying organisms lost from 0 to 50% of their physiological efficiency, when 25 cc. of a 5% starch solution were added to 25 cc. of a 2% peptone solution as a medium, as is shown in the following table:

TABLE VI

No.	Organism	A N-10 NH ₄ OH produced	B N-10 NH ₄ OH produced
2.....	<i>B. fluorescens</i>	9.00	8.85
3.....	<i>B. proteus vulgaris</i>	13.80	12.80
4.....	<i>B. niger</i>	16.62	12.05
5.....	<i>B. coli</i>	10.02	9.70
6.....	<i>B. prodigiosus</i>	7.92	7.30
8.....	<i>B. pyocyaneus</i>	16.80	14.10
10.....	<i>B. subtilis</i>	16.25	7.70
11.....	Garden soil No. 2	15.05	15.50

Column A gives the ammonia produced in the absence of starch; Column B in the presence of starch.

The introduction of $\text{Al}_2(\text{OH})_3$ to soils in tumblers causes the same slight depression in ammonification power as observed when starch is added to liquid culture media. The ammonifying soil flora is about 87% as efficient in the presence of .5 gram of $\text{Al}_2(\text{OH})_3$ as when that substance is absent. Varying amounts of salts or water seem to have little or no influence on the above-mentioned figure. One set containing $\text{Fe}_2(\text{OH})_3$ gave practically the same results as were found when $\text{Al}_2(\text{OH})_3$ was used. The writer is of the opinion that the colloids used have no particular toxic reaction upon the bacteria (in mixed culture), but that some undetermined factor, as the absorption of ammonifiable nitrogen, diminishing the quantity of ammonia possible to be produced seemingly decreases the physiological efficiency of the soil flora. The difference in the physical condition of the soil treated with $\text{Al}_2(\text{OH})_3$ was easily distinguished. The physical differences in relation to water supply were lessened by using different quantities of water and thereby establishing optimum moisture conditions for the untreated soil and for soil containing $\text{Al}_2(\text{OH})_3$.

One series of tumblers was devoted to the effect of $\text{Al}_2(\text{OH})_3$ on nitrification as a soil function. Since the increase of colloids in the soil decreases the available water, assuming the water content of the soil to remain fixed, and since nitrifying organisms are sensitive to the supply of moisture, it was deemed best to determine the optimum water condition for nitrification in soils free of $\text{Al}_2(\text{OH})_3$ and those to which the colloid had been added. The details and results of the experiment are given in the following table:

TABLE VII

No.	Soil	Blood	$\text{Al}_2(\text{OH})_3$	H_2O	Mg. of N as nitrates
0 (ster.)	.008	29	25 cc.	0	1.2
1	.008	29	19 cc.	0	11.1
2	.008	29	19 cc.	3	13.3
3	.008	29	25 cc.	10	8.3
4	.008	29	25 cc.	3	4.8
5	.008	29	25 cc.	6	3.9
6	.008	29	25 cc.	9	1.6
7	.008	29	25 cc.	12	.7
21	.008	29	10 cc.	16	9.4
22	.008	29	10 cc.	19	9.6
23	.008	29	10 cc.	22	7.1
24	.008	29	10 cc.	25	3.7
25	.008	29	10 cc.	28	2.0

The examination of this table reveals some very interesting data. In the first place $\text{Al}_2(\text{OH})_3$ acts in some manner as a stimulant. Perhaps some aluminum ions go into solution in the organic acids, and react favorably upon the nitrifying organism, or the OH ions may perform the function of neutralizing organic acids, thus eliminating this undesirable factor. The highest production of nitrates is noted when 19 cc. of the colloidal suspension and 3 cc. of sterile distilled water are added to 100 grams of soil containing 2 grams of blood. Thus this tumbler held nearly 22 cc. of water, and yielded 13.3 mgs. of nitrogen as nitrates. When the soil was watered with 22 cc. of sterile distilled water the production of nitrogen as nitrates was only 7.1 mgs. The optimum moisture condition in the soil alone for nitrification appears to be about 19%, with a formation of 9.6 mgs. of nitrogen as nitrates. With 19 cc. of colloidal suspension 11.1 mgs. of nitrogen as nitrates were recovered. Evidently a stimulation occurs.

The addition of colloidal matter increases the percentage of moisture required to bring about optimum conditions. On the other hand, nitrification proceeds more advantageously where excessive moisture obtains, if the colloid is present; for instance, 28% of water in the soil practically inhibits nitrification, reducing the nitrogen found as nitrates to 2.0 mgs., while 4.8 mgs. are found where 28 cc. of water including .5 gram of $Al_2(OH)_3$ are added to the soil, and 3.9 mgs. are produced even when 31 cc. of water and the colloid is present. These effects are primarily physical, due to the increased surface brought about by the colloid. Perhaps this circumstance may be responsible for the apparent stimulation already noted. It is also quite likely that the oxidizing power of the soil exclusive of the nitrifying organisms is benefited by increased interior surface.

The study of colloids of all types in soils relative to the various chemical and physical reactions upon living organisms of the plant world should be continued, for it leads to a wider knowledge of the functions and behavior of soils under various conditions.

DEPARTMENT OF ANIMAL HUSBANDRY

Comparison of Alfalfa Hay and Alfalfa Silage as a Feed for Dairy Cows

In this experiment it was planned to use four cows, two fed on alfalfa hay as a roughage and two fed on alfalfa silage as a roughage, the grain ration being the same in both cases. The grain ration consisted of ground corn and oats in equal parts and one part of oil meal to every ten parts of corn and oats. The experiment was started on February 3, 1913, with two cows, No. 1 and No. 2, fed on silage, and No. 3 and No. 4 on hay. The respective weights were as follows:

No. 1, 1,370 lbs.; No. 2, 1,000 lbs.; No. 3, 1,005 lbs.; No. 4, 1,100 lbs.

During the first week cows Nos. 1 and 2 became very restless, breaking out of the corral several times and eating anything they could get in the shape of dry roughage. They finally refused to eat the silage, and at the end of the week the following change was made: Cows No. 1 and No. 2 were fed hay, and cows No. 3 and No. 4 were fed both hay and silage. It had been noticed that when all of the cows were being fed on mixed roughage that an increase in the amount of alfalfa silage and corresponding decrease in the amount of hay seemed to cause a slight constipation, which was considered peculiar inasmuch as the silage furnished more succulence, but when the hay was entirely removed the opposite condition obtained, making it necessary to change the form of feed for these cows.

The effect upon the milk flow and fat production was as one would expect when the digestive organs are out of order. There was a decrease in the amount of milk and slightly abnormal percentage of fat, making an increase in the total amount of fat over that of the preceding week. The two cows fed on hay alone made no variation greater than usually occurs from week to week. The following table shows the results during the first six weeks of the experiment after the change of feed had been made:

No. of cow	Weight at beginning—Pounds	Weight at end	Total hay fed—Pounds	Total silage fed—Pounds	Total grain fed—Pounds	Estimated cost of feed	Production of milk	Amount of fat	Increase	Profit
1	1,375	1,435	804	.....	392	\$10.96	1,150.7	40.32	13.97	\$3.01
2	1,000	1,015	734	.....	389	10.55	1,452.9	40.68	14.11	3.56
3	1,005	1,095	490	812	414	11.83	1,292.5	41.76	14.50	2.77
4	1,100	1,175	562	840	420	12.37	1,922.6	51.31	17.60	5.23

As is seen in the first table, all of the cows gained in weight. No. 1, being well advanced in lactation, gained more than the others and also lost in production at the end of the period. The slight decrease in the production of Nos. 3 and 4 (No. 3, 1.44 pounds of fat per week; No. 4, .74 pound of fat per week) might easily be attributed to advancement in lactation period, but, from the fact that No. 2 gained slightly (.15 pound per week), it would be fair to conclude that the alfalfa silage has no beneficial effect on milk production. A single experiment being insufficient to prove such a point, it is planned to repeat several times for verification.

A Study of the Development of Beef and Dairy Cattle with Reference to Feed, Form, and Function

This experiment was begun January 13, 1913. In conducting this investigation the plan was to measure the animals each month and keep an account of the feed consumed. At the beginning all of the calves in the University herd were included, but, on account of sales and losses, only four animals were retained—one Holstein-Friesian bull, one Holstein-Friesian heifer, one Aberdeen Angus steer, and one Hereford heifer.

The following forms will show how the data is kept:

FORM I

Amount of whole milk,	.	.	.	.	.....
Amount of skim milk,	.	.	.	.	.....
Grain,	.	.	.	.	.....
Alfalfa hay,	.	.	.	.	.....
Silage,	.	.	.	.	.....
Roots,	.	.	.	.	.....
Remarks,	.	.	.	.	.....

FORM II—MEASUREMENTS TAKEN

	<i>Date</i>	<i>Date</i>	<i>Date</i>
Weight,
Length of rump,
Length of back,
Length of neck,
Length of head,
Width of head,
Width of hips,
Width between pins,
Height of chest,
Height of withers,
Height of hip bones,
Height of pin bones,
Girth at heart,
Girth at middle,
Girth at flank,

These measurements are recorded each month, and it is planned to continue the work until the animals are mature, adding new animals to the list each year. As yet no conclusions can be drawn, as the work has not proceeded far enough.

A Comparison of Various Soilage Crops as a Substitute for Pasture for Dairy Cows

This experiment is being carried on jointly by the Departments of Agronomy and Animal Husbandry at the University Farm. The Agronomy Department is to furnish green feed in season, beginning with rye and vetch, followed by alfalfa, oats, and peas, second-crop alfalfa, corn, and third-crop alfalfa in rotation, or changed in such a way as to continually use green feed. The Animal Husbandry Department is to feed the cows, keep account of the weights of feed and of the animals, and the value of the product.

This experiment being in progress at the present time shows no results other than the fact that the cows keep up well on rye and vetch, both in flesh and milk production.

Exhibits

The College of Agriculture of the University of Nevada was represented at the California State Fair, 1912, very creditably, showing Herefords, Holstein-Friesians, Aberdeen Angus, and Jerseys in cattle; Berkshire hogs, and Merinos, Southdowns, Shropshires, Dorsets, and Hampshires in sheep. Premiums to the amount of almost \$900 were carried away.

Judging Team

A judging team composed of students from the classes in Animal Husbandry was in attendance at the International Livestock Exposition at Chicago, November, 1912.

DEPARTMENT OF BOTANY, HORTICULTURE AND FORESTRY

P. B. KENNEDY

A. A. HELLER

The following lines of investigations have been carried on: Moisture conditions on irrigated and nonirrigated acres of apple orchard on the Station Farm; late or long period blossoming of varieties of apples to escape spring frosts; frost-fighting investigations; a new disease of Carolina poplar; vegetable growing; native vegetation as an indicator of soil conditions; the flora of the State; clover investigations under the Adams Fund; a study of our native poplars and coniferous trees by Dr. A. A. Heller; investigations of wormwood and Indian hemp as plants worthy of introduction into the State; eradication of weeds.

Irrigated and Nonirrigated Areas of Apple Orchard

The trees were planted on both acres in the spring of 1903. The third spring (1905) no further irrigation was given to one acre, while the other received a thorough irrigation once a month. The former we have termed the dry-land acre, and the latter the irrigated acre, for convenience.

The dry-land acre has been kept in perfect tilth with a mulch of about six inches of loose soil, while the irrigated acre was cultivated after each irrigation.

No difference has been detected in the growth of the trees or the production of blossoms or fruit on either of the acres for the last six years.

In the fall of 1912 a hole six feet square and fifteen feet deep was dug directly in the center of each acre to determine the character and condition of the soil in the two acres. The soil has been generally termed a silt loam by Mr. L. T. Sharp of the Department of Soils. It has its origin in the old lake deposits and the difference in the character of the soil at the different depths is due to the different strata encountered.

The conditions in the dry-land acre were as follows:

First foot—Fine loose silt loam, very dry.

Second foot—Firm silt loam, compacted, very dry.

Third foot—Hard silt loam, compacted, slightly moist.

Fourth foot—Same.

Fifth foot—Same.

Sixth foot—Soil less compacted, slightly moist.

Seventh foot—Soil more sandy with a few small rocks, slightly moist, darker in color.

Eighth foot—Soil containing gravel, dark in color, stiff and hard, more moisture.

Ninth foot—Moisture increasing, soil more loose with fewer rocks and gravel.

From the tenth to the fourteenth foot strata of gravel of different degrees of fineness were passed through, while at the fifteenth we came to pure gravel and large round boulders. Here the conditions were wet, but no standing water.

The conditions in the irrigated acre were similar as regards the character of the soil, but the moisture conditions had changed its

texture to a considerable extent. The silt loam in the second, third, fourth, fifth, and sixth foot in the dry-land acre was very hard and dry, while in the irrigated acre it was moist and easily shoveled out without the aid of a pick. The workman made the remark that it was fine for potatoes.

In spite of the conditions of moisture and texture of soil as above noted, the trees in both acres seem to have grown equally well.

Both holes remained practically dry throughout the winter.

In order to find out what difference the treatment of the two acres had on the development and direction of the roots, a deep ditch two feet wide and fifteen feet long was dug out alongside of a tree in each acre, thus severing half of the root system.

The roots in the irrigated acre had a tendency to remain nearer the surface than those in the dry-land acre. There was not much difference in this respect, however, as would be expected. The roots of the tree on the dry-land acre spread wider and deeper seeking for moisture.

An interesting feature was the development of numerous clusters of small fine roots attached directly to the main trunk of the tree and from three to six inches below the surface of the ground. These were present on the trees on both acres, but were more abundant on the dry-land acre.

During the winter a fall of snow occurred while the ground was dry as powder. An examination after the snow disappeared revealed the fact that the snow had only moistened the ground to a depth of two inches. The snow had for the most part evaporated into the air. Just exactly what part these small roots play in the supplying of moisture and food material to the tree we are unable to state.

We are of the opinion that the trees on the dry-land acre are being watered by subirrigation through capillary action of the soil from underground water derived from irrigation ditches and lands above, and that the cultivation has had little to do with the conservation of moisture secured from rains or snow.

The water level is known to come within six feet of the surface on similar land about 200 yards distant during the middle of summer, which is the height of the irrigation season.

By watching the rise of the water in the fifteen-foot holes now in the orchard we will be able to determine this exactly. The roots of the tree on the dry-land acre extended to a depth of ten feet, while very few on the tree on the irrigated acre extended to a depth of eight feet.

We believe from the observations that, on much of the land in the Truckee Valley where there is deep soil and no hardpan, apple trees after the first few years will grow successfully without irrigation.

Blossoming of Apple Trees

The time of blossoming of a variety of apple has an important bearing on the prospects of its producing fruit in this climate. The Station orchard, which contains many varieties, began to blossom this year on April 6 and continued to blossom until the 1st of June. On account of the large number of severe frosts which occur during the month of April, we consider that all early blossoming varieties should not be planted. Even if a variety begins to blossom the last week in April or the first week in May, the orchardist will usually have six or more frosts to contend with.

Some of the most suitable varieties for planting are Yellow Transparent,

Early Harvest, Wealthy, Maiden Blush, Rome Beauty, Jonathan, York Imperial, Rhode Island Greening, Gano, Black Ben, Ben Davis, Geniton.

Frost-Fighting Investigations

The orchard was in bloom this year from April 6 to June 1. During the month of April our record at the orchard shows that the temperature reached freezing or below eighteen times.

To attempt to save all the varieties in the orchard would not warrant all the expense in labor and oil, so the orchard heating was not begun until the last week of April at a time when the largest number of varieties was in full bloom. The nights of April 6 and 7 were very cold, being 15° and 16°F. At this temperature numerous varieties of apples, both in the orchard and throughout the town, were frozen, even when the flower was closely covered with the green calyx. By smudging on April 30 from 1 to 6:30 a. m., on May 1 from 1:45 to 6:15, May 2 from 2 to 6:15, on May 3 from 2:30 to 5:30, May 11 from 4:30 to 5:30, we were able to save the crop on many of the trees.

Even if frost conditions had been at their minimum, like last spring, the apple crop this year would have been light, as the tendency was last year to overbear, and many varieties of apples are triennial bearers, i. e., regardless of frost they would bear good crops only every other year.

We strongly urge the securing of a suitable site for a Station orchard that may be planted on a commercial basis with varieties suitable to the climate and until such time to postpone the frost-fighting investigations. There are no orchards, including the Station orchard, in which frost fighting could be carried on whereby the results could be interpreted as of commercial value to the prospective fruit-grower in northern Nevada.

At the suggestion of the Cederborg Engineering Company of Denver, Colo., we devised a system of colored electric lights connected with thermometers in the orchard whereby we could determine the temperature at various parts of the orchard while busy with the smudge pots. The thermometer acted in a similar manner to a switch, turning on or off the light at different temperatures. We will have a small crop of apples this year, but the individual specimens should be superb, as the trees have fewer to bring to maturity. A large number of varieties are represented.

Plant Diseases

A fungous disease on the Carolina poplar has been given some attention by Professor Frandsen, of the Department of Biology, and myself. Diseased material sent to the Pathological Division of the Forestry Department at Washington, D. C., was diagnosed as belonging to the genus *Cytospora*. They informed us that it has been heretofore only known to attack dead tissue, but were convinced from our report that it must attack living tissue in the West. We have taken photographs of the appearance of the diseased trees and of the fungus as well as studied the mycelium and spores. We propose to publish a bulletin on this subject.

Vegetable Growing

We have begun a series of tests to determine the best varieties of vegetables for general culture in this region. Many kinds of vegetables offered for sale in other markets are not to be found in Reno. An attempt will be made to introduce some of these. On account of the large amount of labor entailed in work of this character, we are confining our experiments to a single experiment each year. This year we have

planted eleven of the leading commercial varieties of onions on one acre, on what may be termed the average soil of the valley. Extensive cultivation of onions is confined largely to the alluvial soils along the Truckee River. Our experiment will determine whether onion culture could not be extended profitably to other lands in the valley. Next year we will test a large number of varieties of garden peas. We should like to see an additional greenhouse placed on the Campus for experimentation with winter vegetables such as tomatoes and cucumbers. These command a high price in Reno during the winter.

Native Vegetation as Soil Indicators

We have for a number of years noticed the close association between the character of the soil and the character of the native plants found growing upon it. It is well known that where the big black sagebrush (*Artemisia tridentata*) grows luxuriantly the soil is excellent for agricultural purposes. This information could be added to by determining the character of the lands upon which other native species equally abundant are found. This work should be carried on in cooperation with the Department of Soils.

The Flora of the State

This work has been continued as time permits. We now have about 14,000 sheets of plants in the herbarium, duly mounted and classified. These investigations have been largely carried on by Dr. A. A. Heller.

Clover Investigations

The investigations of clovers as a project under the Adams Fund have made considerable headway during the last year. We have published some preliminary papers and completed the section of Rabbit's-foot clovers. Numerous drawings of species in the other sections have been made. The completion of this work depends upon the amount of time that can be spared from teaching work under the Hatch Fund in horticulture and general routine work of direct interest to the State.

Forestry Investigations

Dr. A. A. Heller has devoted most of his time to the teaching of Forestry in the Agricultural College, and to the investigations of the poplars and coniferous trees of the State.

Drug Plants

At the suggestion of Dr. Rodney H. True, of the Division of Drugs and Poisonous Plant Investigations of the United States Department of Agriculture, we have this year begun an experiment with two plants which in certain parts of the United States have brought large sums of money per acre. These are wormwood and Indian hemp. Both are making excellent growth at the present time and give promise of success.

Weeds

For many years it was looked upon as somewhat of a joke to investigate weeds in the State of Nevada. Now, however, a number of weeds, like mustard, dandelion, and the wild morning-glory, have seriously interfered with the grain crops. At the present time it is difficult to find a grain field that is not yellow with mustard. The love vine, or dodder, is now widespread in the alfalfa. The wild morning-glory spreads in a few years from a patch a yard square to many rods in extent. We have attempted to eradicate it by applying different strength solutions of iron

sulphate, but to no purpose. The tops are killed, but the plants came up from the underground stems as thickly as ever. Deep plowing was also attempted, but this also fails. We were in hopes of discovering an easy method of eradication, but it is doubtful if there is any. This year we are hoeing off the tops as soon as they appear, with the theory that if the stems underground are not fed with the necessary starch-forming material from the air they must die. This failing, the last resort must be to actually dig out and rake together the roots and stems and burn them—a very costly procedure.

In regard to the mustard, we strongly recommend the purchase of a spraying outfit to demonstrate to the farmers that the mustard can be killed and yet leave the wheat crop unharmed. This has been tried in a number of States with success.

Twenty-four samples of seed, principally alfalfa, have been examined by the department for impurities.

State Experiment Farm

The writer has continued to act as Chairman of the State Experiment Farm at Logan, Clark County, Nevada. The direction of the experiments, the care of the finances, and the writing of the report entail a considerable amount of work in addition to the regular investigations of the department. It is valuable to the department, however, in that it gives it a very broad view of the needs of the State along agricultural and horticultural lines.

Extension Work

The writer joined the Utah demonstration train through the southern part of Nevada and spoke on horticultural topics. In Reno two lectures have been given on the flora of Nevada.

REPORT OF THE DEPARTMENT OF CHEMISTRY

C. A. JACOBSON

In my absence, Professor M. Adams, in charge of the collegiate chemistry in this University, wrote last year's departmental report and including a résumé of the investigations I carried out abroad. Having returned to resume the work in the Station, it would seem advisable to give a more detailed account of the results.

In this department two projects have been chosen for investigation under the Adams Fund. One of these is an investigation of the poisonous principles in some of the local poisonous plants that are doing most of the damage to stock. Work has been started on *cicuta ragans*, popularly called water hemlock or poison parsnip, and was continued for six weeks in Professor A. Pictet's laboratory at Geneva, Switzerland. Since returning to Reno that work is being continued here with the hope that it will be completed and published this fall. The other investigation, which thus far has received the major attention, is one whose aim is to better understand the mechanism of the fixation of atmospheric nitrogen by leguminous plants. If this question were thoroughly understood, it would doubtless be possible to so modify the conditions of the process as to obtain a larger yield of the fixed nitrogen.

Only the first steps of this work have been taken, in that a few of the organic constituents of the alfalfa plant have been isolated and determined. When the essential constituents have been characterized, it is planned to determine what relation these compounds sustain to the nitrogen content and nitrogen-fixing power.

At first two ketones were isolated from the stem and leaves of the alfalfa plant. One of these, myristone, is a compound with twenty-seven carbon atoms, fifty-four hydrogen atoms and one oxygen atom in the molecule. The other, which the writer gives the name alfalfone, is also a ketone of similar properties, but of a little smaller molecular weight. A full chemical discussion will be found of myristone in vol. 33, page 2048, of the Journal of the American Chemical Society, and of alfalfone in vol. 34, page 300, of the same publication. The latter compound is entirely new. Heretofore the former has only been produced synthetically. This is the first time it has been obtained from a natural product.

Several other products had then been prepared in an impure state from alfalfa, but before working these up it was decided that a knowledge of the chlorophyll present would throw more light upon the problem. The chemistry of chlorophyll is a very difficult subject, and only two chemists have done very extensive work in this field. Furthermore, the apparatus necessary for such work is quite expensive and beyond our present means to secure.

The same conditions obtained for other phases of the alfalfa investigation as well, and it was decided to carry out certain parts of the work in foreign laboratories.

In the fall of 1911 I began the work on chlorophyll in Professor L. Marchlewski's laboratory at Cracow, Austria. Finding that no reliable method existed for determining the amounts of the two green components of chlorophyll in the presence of one another, we first set about to

develop such a method. In the meantime we concluded that it would be advisable to try to clear up the mooted question if the two components are always present in the same ratio or perhaps in equal proportion in all plants. After examining some twelve varieties of leaves we settled this question in the negative. The paper was published with seven tables and twelve spectrographs in the January (1912) number of the bulletin of the Cracow Academy of Science, and later in the American Chemical Journal, vol. 47, page 221.

As to the first question it should be said that two methods were worked out for determining neo and allochlorophyll in the presence of one another. One of these, the spectrographic, is very delicate and satisfactory. It is based upon the principle that the two chlorophyll components produce different absorption spectra in the ultra violet. By comparing the spectrograph of the solution to be determined with a series of spectrographs representing the two components mixed in different, but known, proportions, the concentrations being kept the same, one can read off its composition directly to within 1 or 2 per cent. The yellow coloring matters and other impurities do not interfere with the accuracy of the determination.

The presence of impurities in the solution renders the other method inaccurate and therefore of less value for general use. One of the components of chlorophyll, namely the neochlorophyll, was, for the first time, prepared in pure condition and its absorption spectrum photographed.

This work was published in the February (1912) number of the bulletin of the Cracow Academy of Science and also in the American Chemical Journal, vol. 48, page 111.

Having produced a satisfactory method for analyzing chlorophyll, it remained to apply this to the chlorophyll products from alfalfa. This was done with the result that alfalfa contains 0.68 per cent chlorophyll in the air-dried leaves and 0.28 per cent yellow coloring matters. The particular lot of chlorophyll with which I was working contained 66 per cent neo and 34 per cent allochlorophyll, but this may vary in different lots and also in successive crops of alfalfa.

A full discussion of the above will be found in the Journal of the American Chemistry Society, vol. 34, page 1263.

Before leaving the chlorophyll work at Cracow, a plan suggested itself to us by which a method might be worked out for determining minute quantities of chlorophyll; for example, to determine the character and quantity of the chlorophyll in one small leaf. The method was successfully worked out, and is based on the principle of comparison of the intensity of the absorption bands in the ultraviolet spectrum of the chlorophyll solution whose concentration is sought, with the intensities of the corresponding bands produced by solutions of known concentration.

By this method it is possible to determine the quantity and character of the chlorophyll in a green leaf whose weight is only 0.2 gram. The method is described in the Journal of the American Chemical Society, vol. 34, page 1266.

From Cracow I went to Geneva, Switzerland, and began work on the cicuta or poison parsnip, with the results already noted. From there I went to Upsala, Sweden, where, in cooperation with Professor S. G. Hedin, an investigation was undertaken to determine the character of the enzymes present in alfalfa seeds. The work was of paramount importance to my larger alfalfa problem.

The results from this work show that alfalfa seeds contain an enzyme that hydrolyzes starch like amylase; one that hydrolyzes amygdaline like emulsin; one that coagulates milk like rennin; one that precipitates gallin purpure from a pyrogallol solution with hydrogen peroxide like a peroxidase; and one that digests casein and Witte peptone as well as autolyzes the seed protein like a protease. The last-mentioned enzyme was characterized as a vegetable erepsin for the reason that it will not begin the digestion of a true protein like egg albumen, serum, legumin, or conglutin. Its casein digestion is inhibited by the presence of a small quantity of albumin or serum.

A full discussion of this work will be found in the Journal of the American Chemical Society, vol. 34, page 1730.

In addition to the above work a substance obtained from the alfalfa extractions, and labeled as Precipitate C, was characterized as a saponine. It gives all the important reactions of this class of substances. Its empirical formula and chemical transformations have not yet been worked out.

The chemistry of the proteins in the seeds and plant is another very important phase of the alfalfa investigation, which could better be carried out abroad than in our laboratory at home. This work was undertaken in Professor E. Abderhalden's laboratory in Halle, Germany. At first an attempt was made to isolate the principal proteins found in alfalfa seeds, but, meeting with serious difficulties along this line, we decided to investigate the influence of sprouting on the character of the combined proteins in the seeds. To do this we made quantitative determinations of the amino acid constituents obtained by hydrolyzing equal weights of seeds before and after sprouting. The hydrolyses were made and eight or ten amino acids of the one were isolated and determined. A similar analysis of the products of the other hydrolysis could have been finished in about three weeks' time, but unfortunately my health failed and I was obliged to give it up. Professor Abderhalden promised to complete the work and have it published. A résumé of this work will therefore be left for next year's report.

The total expense in connection with my foreign work, outside of salary, amounted to only \$206.58.

This department has received no supplies in the form of chemicals or apparatus, nor have any improvements been made to the laboratory during the years 1911 to 1913.

My assistant, Mr. Fred. C. Henriques, was employed by the Pure Food and Drug Department of this Station during my absence and up to March of this year, when he accepted a position in similar work at Buenos Ayres, Argentine Republic, South America.

The present needs of the department are: additional laboratory space, where important instruments may be mounted and operated, an assistant chemist having had some research training, a laboratory helper to do the routine work, chemicals and laboratory supplies amounting to \$450, scientific apparatus amounting to \$735, and laboratory furniture amounting to \$226, besides the ordinary running expenses. These are urgent needs, and the department cannot carry on its work efficiently without them.

Professor M. Adams submits the following report upon work done on wood distillation, carried out under the Adams Fund:

Samples of four different kinds of wood have been distilled and the products

examined. From a sample of "fat" yellow pine a clear water-white sample of light oil, boiling at between 158 and 178 degrees, and possessing many of the properties of the spirits of turpentine, has been obtained. This oil is now being examined to determine its chemical identity. Calculated from the results so far obtained, one cord of "fat" yellow pine should yield 26 gallons of this turpentine-like oil. Besides this light oil, there have been obtained from the same wood, acetic acid, methyl alcohol, creosote, wood tar, and charcoal of commercial value.

A sample of green yellow pine was also distilled and a sample of the above-mentioned light oil was obtained, but the yield was small, amounting to only about five gallons per cord.

Samples of sagebrush and *pinus monophylla* have also been distilled, but the assay of the distillate has not yet been completed.

Following is an itemized report of the water and soil analyses carried out by Messrs. S. C. Dinsmore and Miles B. Kennedy during the past year:

Soils (complete analysis)	12
Soils (alkali)	30
Sugar beets	1
Water (complete mineral)	15
Water (sanitary)	72
Mineral (complete analysis)	4
Mineral (partial)	19
Miscellaneous	12

DEPARTMENT OF ENTOMOLOGY

S. B. DOTEN

The Department of Entomology continued the same lines of work which were followed during the previous year. Among the insects under observation in the insectary was an alfalfa-plant louse, as yet unidentified, regarding which a paper is to be presented later by Mr. Cecil W. Creel. But little progress was made in the studies of certain cutworms injurious to alfalfa, since no reports came to the Station of such injuries, and none occurring in the immediate vicinity of the University.

Some scouting was done for the alfalfa weevil, whose introduction into Nevada may be expected at any time; but there is apparently no good reason at present for thinking that it has become established.

The experiments with the European elm scale were continued. A very careful test was made with methods and apparatus for washing a large number of elms of different species by means of a strong stream of water from a garden hose, and the usefulness of the method was more clearly demonstrated. It was shown also that some skill is required for successful washing by this method, and that the results depend primarily on the thoroughness of the work.

Under the Adams fund, studies of certain hymenopterous parasites attacking the codling moth were continued, and it became more apparent that the value of this project will lie largely in the light that the studies will throw on certain biological factors connected with reproduction and with the competition existing among several primary parasites and a number of secondary and tertiary parasites. Studies of the importance of food on the mature parasites were completed and will be published later.

The desire of the Entomologist to illustrate his forthcoming publications with photographs of living insects led him to make an exhaustive study of methods of illuminating such insect subjects. These studies bore fruit in a finished flash-light apparatus, electrically controlled, permitting exposures as brief as $\frac{1}{100}$ second. The examination of this apparatus by prominent entomologists led them to express so much approval that the writer is encouraged in the belief that this apparatus may prove of some use in other experiment stations. It will be necessary, however, to construct this apparatus under factory conditions, so that for its fullest usefulness it will be essential to interest a manufacturer of laboratory supplies and materials in the device.

While the department was greatly hampered by lack of means with which to hire labor and to purchase facilities, still the fact that the work was restricted closely to the purpose of the funds from which the Entomologist was paid made it possible to make some degree of progress.

DEPARTMENT OF METEOROLOGY AND CLIMATOLOGY

J. E. CHURCH, JR.

S. P. FERGUSON

So far as funds have been available, the active prosecutions of the problems under investigation by this department have been continued.

Projects

These problems are:

- (1) The Forecasting of Frost from Mountain Tops.
- (2) The Relation of Mountains and Forests to the Conservation of Snow.
- (3) The Temperature Survey of the Agricultural Lands of the State.

The solution of the first problem necessarily requires great perseverance. The mechanical equipment on Mount Rose is still causing some trouble, and some radical readjustment of the cylinders of the meteorograph may have to be made to assure uniform movement of the record sheet. Most other features of the equipment are now running normally. With one rewinding every five or six weeks, the standard pendulum clock in the observatory has run continuously since January under all conditions of storm and wind by which the tiny building is beset. The original price of the clock was only \$12, yet during this period the clock has lost on an average only two minutes a month, which, under the circumstances is a very excellent performance. An anemometer has been made with the supporting arms passing around the back instead of through the cups, with the result that slugs of ice can no longer form within the cups and wreck them. The battery system is still a problem, and mechanical registration of sunshine may yet be necessary. Kite flights have been inaugurated to determine the meteorological error of Mount Rose. Heretofore the ruling of the continuous meteorograph sheets has been a serious problem. However, a ruling machine has been devised by which ruling may be easily and speedily done. An analysis of the data has been begun and will now be carried forward continuously to a conclusion.

Owing to uncertainty regarding the future of the snow studies, no attempt was made to employ an observer at Lake Tahoe until after the Legislature met, and then the regular observer could not be obtained. However, snow measurements on Mount Rose have been conducted each month throughout the winter, and interesting evidence has been gathered on the movement of snow fields under the impulse of the wind. Considerable progress has been made in the preparation of a preliminary bulletin on "The Conservation of Snow: Its Dependence on Mountains and Forests," and several short bulletins in the form of magazine articles have been published.

The snow sampler has been still further improved by using lighter material and employing shellac exclusively in place of oil to prevent rusting and the adherence of snow. By this means the adherence of snow has been almost entirely eliminated and with the result that one

man unaided is now able to drive the sampler to depths exceeding twelve feet.

Because of uncertainty regarding the amount of snow in the Tahoe Basin available for irrigation and power this season, the Truckee River General Electric Company and the Reclamation Service cooperated with the department in making a snow survey. Seventeen days were consumed in the work. Former courses were carefully followed and compared. According to data obtained there was from 25 to 30 per cent more snow in the basin this year than last, or 72.9 per cent of normal. From the data obtained last year in the course of the regular snow studies, Mr. L. O. Murphy, Hydrographer of the Truckee River General Electric Company, forecasted the summer level of the lake within one-tenth of one foot of the level actually attained.

Since this basin is large, the method of surveying by typical slopes has been devised, a sufficient number of typical slopes being chosen throughout the basin. New courses were added to the old, particularly along the main crest of the Sierra Nevada. Courses on Mount Freel in the Carson Range should also be added to increase the total measurements in the eastern half of the basin.

Publications

Several magazine articles and news bulletins have been prepared during the year. The former were considered necessary in order to protect data that had been gathered as early as 1909-10, but had not been published, partly because the results were radical and verification was desired, and partly because my time and strength were being fully absorbed in teaching at that time. The latter were reports of snow surveys on Mount Rose and in the Tahoe Basin. The magazine articles appear in the following list:

GENERAL

The Progress of Mount Rose Observatory, 1906-1912. *Science*, N.S., Vol. XXXVI, No. 396, pp. 796-800, December 6, 1912.

SNOW STUDIES

The Conservation of Snow: Its Dependence on Forests and Mountains. *Scientific American Supplement*, Vol. LXXIV, No. 1914, pp. 145, 152-155, September 7, 1912.

The Conservation of Snow: Its Dependence on Mountains and Forests. *Official Bulletin of the International Irrigation Congress*, Vol. I, No. 6, December, 1912; reprinted in *Engineering and Contracting*, Vol. XXXIX, No. 6, pp. 155-157, February 5, 1913.

Das Verhältniss des Waldes und des Gebirges zur Erhaltung des Schnees. *Die Meteorologische Zeitschrift*, Vol. XXX, No. 1, pp. 1-10, January, 1913.

TEMPERATURE SURVEY

Trailing the Frost Belt in Nevada Snows. (Title not our own.) *Popular Mechanics*, February, 1913, pp. 256-258.

Articles have been requested for publication by the Techno-Photographisches Archiv, Berlin, Germany, in *Science Conspectus* at the Massachusetts Institute of Technology, and in the transactions of the International Congress. These articles either await publication or are being prepared.

Cooperation

Like other departments, this department has sought to cooperate both within and without the University. Except for restrictions due to fiscal regulations, the U. S. Weather Bureau, through Professor A. J. Henry,

in charge of Rivers and Floods, and Mr. H. S. Cole, Section Director for Nevada, would have entered into occasional cooperative snow measurements. However, voluntary assistance has been rendered by both the Bureau and the Department. To aid the Weather Bureau in inaugurating snow surveys in the Carson and Walker River Basins, the sampler was loaned to Mr. Cole, with the result that two samplers were ordered for trial with a view of placing the sampler regularly in the service. Data from the temperature survey have also been loaned to the local office in order that a news bulletin could be prepared, directing the ranchers how to interpret the daily temperature reports. Among other activities, the Weather Bureau has assumed the task of issuing local and individual forecasts of frosts.

The temperature survey will be continued in the Truckee Meadows and at Fernley another season before any stations are removed to new locations. Although the data have not yet been fully analyzed, it is plainly evident that the higher slopes are, in general, more free from frosts than the lower. This difference also appears during the prevalence of "cold waves" in winter. When the air has been thoroughly mixed by high winds, the difference in temperature on the various slopes is practically indistinguishable.

By the aid of thermometers and observation of clouds and wind, considerable accuracy was attained last season in forecasting the degree of temperature to be expected on the following morning. To increase the accuracy of such forecasts, Professor Fergusson is installing a meteorological laboratory at the University largely at his own expense, where, by means of instruments of precision, the relation of cloudiness and humidity to the retardation of falling temperatures can be determined.

Except for a series of early frosts, the present season resembled last, when fruits of all kinds escaped serious injury. Even as it was, most of the apple blossoms would have escaped injury this season except for a single frost of 22.8°F., which destroyed buds as well as blossoms. Several orchardists who were planning to heat their orchards considered them safe because the buds were small, and so were not prepared for the abnormally low temperature that occurred.

Agricultural Meteorology

The activities referred to above are only a portion of those under way or planned, and represent pioneer work in agricultural meteorology, in which the underlying principles of climate in its relation to crops and fruits will be determined locally and applied to the welfare of the State.

This work does not duplicate that of the Weather Bureau, but rather precedes and supplements it. For this reason the study of meteorology in the Experiment Stations is now being welcomed and heartily supported by the Office of Experiment Stations.

Plans

The problem of forecasting frost from mountain tops is just emerging from the mechanical stage into that of analysis and discussion.

Among other projects awaiting opportunity is the forecasting of frost locally and the study of the relation of cloudiness and humidity to the retardation of radiation, to the end that greater accuracy can be obtained.

The causes of frosts and thermal belts have often been discussed, but no final word on this question has yet been spoken. The Truckee Meadows

offer ideal conditions for investigating this problem, and apparatus has already been accumulated toward beginning this work actively when other problems permit.

In December, Professor Fergusson was called to Dayton, Ohio, to testify in a patent case defended by the Wrights, and he used the opportunity afforded to spend a brief time at Blue Hill Observatory to prepare further equipment for the work and to consult with Director A. C. True and other officials of the Office of Experiment Stations and of the Weather Bureau at Washington regarding the future of the department. At Pittsburg Professor Fergusson was one of the speakers at a series of meetings called by prominent men to advance the interests of world meteorology, and at Boston was invited to address the Boston Scientific Society on the relation of snowfall to irrigation, and the meteorological work being conducted at Mount Rose observatory. Particular interest was shown in the long-time records of weather being obtained. He was also invited to build two large cellular kites to be used in procuring photographs of the volcano of Kilauea in the Hawaiian Islands. These photographs are to be used in preparing a model of this volcano for Harvard University.

DEPARTMENT OF VETERINARY SCIENCE AND BACTERIOLOGY

W. B. MACK

EQUINE ANEMIA

Equine anemia has continued the chief problem of this department during the year. There have been several cases in the same locality where the disease was first noted, but no extensive outbreak like those which occurred there during 1906 and 1907. In September we visited an outbreak in the extreme northern portion of Elko County, about 110 miles from the other locality. We saw there three or four cases of the disease. Horses on three or four ranches were affected, and several had recently died there from what the owners believed to be the same disease. There has been some loss upon these ranches during several years. The descriptions of the symptoms of those animals given by the ranchers appear to indicate that the trouble was due to the disease which we have under observation. There is no traffic between the two localities and no evidence that the disease has been carried from one locality to the other.

There is little progress to record for the year's work. Additional attempts to transmit the disease by inoculation and feeding virus have been made, using for that purpose blood, tissues, and body fluids taken from patients and obtained upon autopsy. Blood was taken from two patients in the northern locality, carried to the ranch where our experiments are being conducted and injected into two horses there. The result of all these experiments has so far been negative.

Clinical and pathological studies of this disease lead to the belief that it is infectious. Our early experiments appeared to confirm that theory, but later ones have had apparently negative results. This negative evidence is not, however, conclusive, and inoculation experiments will be continued as material is available until that point is determined.

Therapeutic experiments have been continued, but no successful treatment has been found.

HOG CHOLERA

No cases of hog cholera came to our attention during 1912. It reappeared this spring in the localities which were affected in 1911. It has not at this writing reached serious proportions, but it may do so as the season advances. This has given another opportunity to use the Dorset-Niles serum in several herds, and the results have been all that we could hope for. Our experience with the use of this serum in the control of hog cholera is limited, but that experience leads to the belief that where serum is properly prepared, tested and standardized, and then skilfully used, the result will not be disappointing. Thus far it has not failed in our hands with one or two exceptions, and the loss in those instances should have been avoided. In one instance several pure-bred pigs died during the simultaneous treatment. We failed to recognize that the resistance of pure-bred animals is less than that of scrubs, and that accordingly the dosage should have been increased. In another instance a lot of serum purchased from another laboratory was heavily contami-

nated. It put an end to cholera in the herd, but the contaminating organisms killed a lot of pigs. This was the fault of those who prepared the serum and is no reason for condemning the use of serum properly prepared. We refuse to send out serum to be used by farmers, but insist upon either using it ourselves or having it administered by qualified veterinarians.

It was our intention to publish early this year a popular paper upon the control of hog cholera by the use of this serum. Publication was delayed by the controversy which has arisen in some localities over the merits of the serum. We have come to the conclusion that it will control the disease in competent hands and shall continue to advise its use where the circumstances appear to warrant it.

"SWELLED HEAD" IN SHEEP

In March it was our privilege to see an outbreak of "swelled head" in sheep. This trouble is occasionally reported among Nevada sheep, but this was our first opportunity to see cases of it. The condition as we saw it is an acute edema of the facial, maxillary and submaxillary regions. It appears suddenly and usually affects a considerable portion of the band. The mortality is reported by the sheep owners as usually high. The cause is unknown.

In this instance between 300 and 400 animals were affected out of a band of 1,600 yearling ewes. The cases all developed during twenty-four hours. We saw them at the height of the trouble and they presented a sorry spectacle. However, contrary to the usual course of the trouble, all but nine of them recovered.

One sheep was killed for autopsy. The viscera and all portions of the body except the subcutaneous tissues about the head appeared normal. There was an extensive edema of the subcutaneous tissues in the facial, maxillary and submaxillary regions. Those tissues were infiltrated and swollen to a thickness of from one to three centimeters. When incised a clear amber fluid appeared. From this fluid pure cultures of streptococci were obtained. With these cultures two Guinea pigs, two rabbits and two sheep were inoculated subcutaneously. Both Guinea pigs and one rabbit appeared to be unaffected. The other rabbit developed paralysis of the posterior legs in about three weeks after inoculation. The paralysis gradually ascended until the anterior legs and the entire body were paralyzed. Control of the head and neck only remained. The rabbit died on the thirty-second day. No lesions were demonstrable upon autopsy except that in sections of the spinal cord the central canal appeared to be dilated. The streptococci were not recovered in cultures. One yearling sheep was inoculated in the submaxillary region, but no effects were noted from the inoculation. The other sheep was inoculated in the superior maxillary region after bruising the skin and underlying tissues. This animal developed a swelling about the size of a large English walnut. At first it was firm and hard, but later it became somewhat "doughy." After a few days it disappeared. We have had no other opportunity to study this disease.

Whether the organism found in the edematous tissues bears any etiological relation to the disease was not demonstrated by these few experiments. If opportunity for further study of this disease presents, we shall undertake it.

MENINGITIS IN HORSES

During 1910 and 1911 a number of horses, burros, and mules died in Mason Valley from a disease which was never accurately diagnosed. One man lost eight horses in 1910; another lost between thirty and forty animals during the following winter; another lost two or three; another lost one; and there were a few other scattering cases in the valley. In January, February, and March, 1911, we saw a few cases. The symptoms resembled those related by various observers under the designations forage poisoning, epidemic cerebro-spinal meningitis, etc. Autopsies failed to reveal lesions of meningitis or in fact lesions of any particular significance. Treatment was attempted upon a few animals, but proved practically worthless, as most of those treated died. Two recovered, but it was probably in spite of the treatment rather than because of it. The mortality was very high; practically all of the affected animals died.

As stated above, no satisfactory diagnosis was ever made of those cases. To diagnose meningitis from symptoms alone when no lesions of meningitis were present was unwarranted. The forage consisted of clean alfalfa hay. There were no poisonous plants found in the hay. It was carefully examined, not only by the writer, but by a competent botanist, and there was no warrant for suspecting that it was the cause of the trouble.

During the last few weeks the disease has reappeared on the ranch where eight horses died in 1910 and taken five horses. We saw the last two during their illness and performed autopsies upon both. In the first there was a profuse amount of blood-stained cerebro-spinal fluid. Portions of this fluid were removed aseptically from the occipito-atloid region and from one of the lateral ventricles of the brain. Pure cultures of streptococci were obtained from it. Sections showed an extensive leptomeningitis. Cultures from the second case were negative. Sections from the brain and cord of this case have not yet been studied. Whether the streptococci isolated from one case might have been found in all—that is, whether all cases were caused by infection with this species of bacteria—or whether this was one of accidental infection of the central nervous system, is an unanswered question. Possibly the future will afford opportunity for further study. In that case every available animal will be thoroughly studied.

INFECTIOUS ABORTION IN CATTLE

In Carson Valley, one of the principal dairy districts of the State, infectious abortion is the cause of heavy losses. Cultures of what appears to be the abortion bacillus, described by Bang and others in Europe and by several investigators in the United States, have been isolated from an aborted fetus. It is our intention to undertake some field experiments to determine if we can produce immunity in virgin heifers and uninfected cows by the use of bacterins prepared from the abortion bacillus and to test these bacterins in the treatment of infected cows.

INFECTIOUS MASTITIS

Several cases of streptococcic mastitis in dairy cows have come to our attention recently. The usual treatment is not effective in many of these cases and the usual final result is the loss of the infected mammæ, so far as the production of milk is concerned. We have several of these cases

under treatment with autogenous vaccines. It is yet too early to determine whether they will yield to this treatment, but the indications are somewhat favorable.

INFECTIOUS ENTERO-HEPATITIS IN TURKEYS

One case of infectious entero-hepatitis in a turkey was brought to the laboratory recently for diagnosis, from the vicinity of Reno. A similar case was sent to us from Carson City in 1910.

TEACHING

During the second semester of the year five university hours of instruction was given to the senior and junior students in agriculture. During the Farmer's Short Course in February, lectures on bovine tuberculosis and hog cholera were delivered and the tuberculin test demonstrated, followed by autopsies upon the reacting cattle.

PUBLICATIONS

There were no publications from this department during the year.

DEPARTMENT OF LIBRARY

MRS. T. W. COWGILL

In the year ending June 30, 1913, but few books have been bought. Accessions from all sources amount to only seventy-four volumes.

The bulletins, periodicals, and pamphlets received have been filed for use or stored. It is expected that a large number of these will shortly be bound.

The suggestion is submitted that an appropriation for binding, available annually, would make it possible better to preserve such loose matter and at the same time keep it in more convenient form for reference.

The usual edition of bulletins has heretofore been 5,000 copies, of which the library has been expected to retain not less than 500 for use. The mailing list, state and general, has steadily increased and now includes about 5,800 names. It is obvious that the Station must cease to supply the whole demand, or that the edition must be increased. For the present an edition of 6,500 would be sufficient.

AVAILABLE BULLETINS OF THE
NEVADA AGRICULTURAL EXPERIMENT STATION

No.	Title
17.	The Woolly Aphis of the Apple.
23.	Sugar Beets.
28.	An Important Elm Insect.
29.	The San José Scale.
30.	Wheat-Cutting at Different Dates.
31.	Texas Cattle Fever.
32.	Sugar Beets.
33.	Field Notes on Some Nevada Grasses.
39.	Some Nevada Soils.
40.	Pig Feeding.
43.	Sugar Beets.
44.	Sugar Beets.
45.	Twigs of Common Trees and Shrubs.
47.	Clover Seeds and their Impurities.
49.	The Carpenter Worm.
50.	Sugar Beets.
51.	A Preliminary Report of the Summer Ranges of Western Nevada Sheep.
52.	Water Supply and Irrigation in Nevada.
53.	Burning Dead Animals.
56.	Crickets.
62.	Native Forage Plants and their Chemical Composition.
66.	Annual Report for 1908.
69.	Irrigation Laws and Litigation in Nevada.
70.	Food and Drug Inspection.
71.	Digestion Experiments on the Range.
73.	A Neglected Field in Photo-micrography.
73 ¹ .	Annual Report for 1910.
74.	Report of Department of Food and Drug Inspection, 1910.
75.	The Sugar-Beet Industry in Nevada.
76.	The Potato Eelworm.
77.	Fixing Standard Weights and Measures.
78.	Hymenopterous Parasites (Technical, Entomology).
79.	Avoidance and Prevention of Frost in the Fruit Belts of Nevada.
	Annual Report for 1911.
	Annual Report for 1912.
	Report of Food and Drug Inspection, 1912.
	Report of Weights and Measures Department, 1912.

Copies of the above may be had by applying to

DIRECTOR, NEVADA AGRICULTURAL EXPERIMENT STATION,
RENO, NEVADA.



STATE OF NEVADA

BIENNIAL REPORT

OF THE

Regents of State University

CONTAINING

BIENNIAL REPORTS OF THE PRESIDENT AND
COMPTROLLER OF THE UNIVERSITY

1913=1914



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : : : JOE FARNSWORTH, SUPERINTENDENT

1915



LETTER OF TRANSMITTAL

UNIVERSITY OF NEVADA,
OFFICE OF THE BOARD OF REGENTS,
RENO, February 13, 1915.

To His Excellency, EMMET D. BOYLE, Governor of Nevada.

SIR: We have the honor to submit herewith the Biennial Report of the Board of Regents of the University of Nevada for the years 1913-1914, containing recommendations for appropriations by the Legislature for the years 1915-1916, together with the biennial reports of the President and Comptroller of the University, as required by the Act of the Legislature approved March 6, 1901.

By order of the Board of Regents.

GEO. H. TAYLOR, *Secretary.*

H. E. REID,
Chairman.

REPORT OF BOARD OF REGENTS

UNIVERSITY OF NEVADA,
OFFICE OF THE BOARD OF REGENTS,
RENO, February 13, 1915.

To His Excellency, EMMET D. BOYLE, Governor of Nevada.

SIR: The Board of Regents of the University of Nevada has the honor to submit the following report for the biennial period ending December 31, 1914.

There is appended to this report the recommendations for the fiscal years 1915 and 1916, together with a summary of the expenditures and receipts for the fiscal years 1913 and 1914. The report concludes with our recommendations. It is first presented in summary form and later discussed in more detail. All recommendations contemplate conducting the University in the most efficient manner.

RESPONSIBILITY OF THE REGENTS

The present Board of Regents have understood it as their responsibility to see that the funds provided for the support and maintenance and permanent equipment of the University are economically and effectively used. This implies that the Regents should have a first-hand knowledge of the uses of these funds and that such a system of accounting should be established as will make it possible for the Regents in administering these funds to know in minute detail how they have been used, and whether they have been used for the purpose for which they have been appropriated.

They are happy to announce that it is their belief that the University of Nevada in its financial organization is so administered that the responsibility rests definitely upon its Board of Regents for its financial administration.

It is the custom and the belief of the governing boards of the best universities in America that the educational side of the university should be left with the president and the faculty. The general character and direction of its efforts, however, must receive the approval of the Board of Regents because they are responsible for financing the affairs of the University. Because of this belief in the organization of the University, the selection of the president becomes a very important function of a board of regents. It was the duty of the present board, because of the untimely death of Dr. Stubbs, to make selection of a president for our University.

In the selection of a president the Regents believed that all consideration—personal, political, or social to themselves as individuals—should be eliminated, and that the choice should be made with the purpose only of selecting a man who through experience and training might take charge of the educational affairs of the University and fit it to the needs of the State. The Regents also recognized that in the choice of a man there must be consideration given to his business experience, as they recognize the affairs of a State University to be somewhat allied to that of a large

business corporation, and the presidential office should be in a measure analagous to that of manager in such business corporation. With these aims in mind the Regents' choice fell upon Archer Wilmot Hendrick, A.M.

The Regents have every confidence in their choice of a president; have realized that he would organize the University so as to make most effective use of the material already there, and they have no fear of the introduction of any revolutionary methods or policies which would disturb effective continuity of the University's growth.

INSTALLATION

The installation of President Hendrick was marked by an outpouring of representative men and women unique in the history of the State. The most prominent men and women gathered at the University gymnasium to witness the brief, simple, but impressive ceremonies with which the new President was inducted into office. Dr. H. E. Reid, Chairman of the Board of Regents, presided. Words of welcome were spoken by Justice Norcross and Justice McCarran of the Supreme Court, Mr. Robert Lewers, Vice-President of the University, Superintendent of Public Instruction John Edwards Bray, Governor Tasker L. Oddie, Mr. W. H. Simmons of the State Railroad Commission, Mr. Victor L. Ricketts, on behalf of the public press of Nevada, Regents Codd, O'Brien, Henderson and Pratt, Dean Watson for the University Faculty, Mr. Thomas Walker for the Student Body, and the Reverend Samuel Unsworth, while Chief Justice Talbot of the State Supreme Court administered the oath of office. Certainly no President ever received a more heartfelt, spontaneous, and joyous welcome than did our new University President.

It may be well here to suggest to the people of this State that the office of President of the University imposes on that individual a complexity of duties seldom appreciated by those who are not intimately connected or related to our State University. The office implies the possession by the individual of respect for personality; the spirit of brotherhood; devotion to scholarship and science, and zealously for cooperation, which alone insures harmony, efficiency, and progress. A complete appreciation of the duties of the office therefore requires of the incumbent a particular and close study of the personality of the staff; a largeness of heart which will embrace with a feeling of brotherhood even those whose personality is not altogether pleasing.

DEANS

The board, desirous of working out to better advantage the educational system of the University, established for the first time Deanships, and placed a Dean at the head of each of the colleges of the University. It was felt by the board that, while each of the various colleges was an integral part of the University, nevertheless they had a somewhat distinct field of operation, and that better service would be had for the University in these fields by placing at the heads of these colleges a Dean, whose primary duty would be to develop the service of that particular college.

JOSEPH EDWARD STUBBS

It is fitting that the Board of Regents should make some recognition of the services to this State of the late President, Joseph Edward Stubbs. He began his presidency here in the year 1894, when the institution was in its beginnings. By persistent devotion and effort to the cause of

education in this State he succeeded in developing an institution in the twenty years of his administration of which we are all proud. We are very conscious indeed of the difficulties he had to surmount; only one with unlimited optimism could have persevered in the plan; that he had difficulties to surmount other than those educational we are well aware, but it is our belief that he always acted with conscientious purpose.

In his later years the burden of the presidential office rested heavily upon him. As the institution grew and his responsibilities became more complex, he attempted duties which overtaxed his strength; he was loath to give them up, though his best advisers saw well that it must be so, and while the Board of Regents, in performance of what they conceived to be their duty, felt that they must take larger control of some matters than they had formerly done when the institution was small, it was done with no challenge of his ability, or with no want of confidence in his guidance, and with no rebuke to his optimism, but with the purpose sole to assist in the upbuilding of the University.

He was a man of such personality that his companionship was charming, and the board shall ever remember him as a gentleman devoting his life and his energies to the promotion of the educational welfare of this commonwealth. We honor him for his steadfastness, for the beauty of his life and sacrifice and service, and whatever we have in our State University in large measure is the result of his work.

It is a matter of deep regret to the Board of Regents that, by his untimely taking off a few months preceding the date when he would be eligible to receive a Carnegie pension, his widow is left without support which would have been hers had he lived until the middle of March of this year. It is hoped that the Legislature of the State will make some recognition of the services of our late President by providing in a measure for the comfort and support of his widow.

RECOMMENDATIONS

There have been several meetings of the Board of Regents at which the estimates for the University's various departments have been considered. These meetings have been attended by all of the members of the new and old board, consisting of Dr. H. E. Reid, Mr. Chas. B. Henderson, Mr. A. A. Codd, Mr. J. W. O'Brien, Mr. Walter E. Pratt, and Dr. J. J. Sullivan. These recommendations are made with the unanimous approval of both boards.

We submit our recommendations, therefore, as follows:

Maintenance.

After a minute examination of the schedules presented by the Comptroller of the expenditures of the last biennial, and a consideration of the attendance of students at the University during the last year, which shows an increase of 25.68%, we recommend that the Legislature be asked to fix a tax to supply a fund for the maintenance of the University which will yield \$203,022.

You will find from a consideration of Schedule F of the Comptroller's report that there was spent in the maintenance of the University last biennial year the sum of \$194,199.

We believe that it is a wise policy for the University to extend the benefits of its educational facilities to mature students in this State who

are not prepared to enter upon courses for degrees, either because of educational deficiencies for entrance or because of financial inability. We anticipate that the extension of this privilege will bring to the University many students in addition to those regularly entered. We assure you, however, that if this maintenance fund is granted that we shall be able with our present equipment to take care of this demand.

This \$203,022 asked for is made up as follows:

Administrative salaries.....	\$12,600
Clerical salaries.....	3,000
Buildings and grounds.....	19,220
Instructional salaries.....	28,660
General expenditures.....	38,125

Making a total for 1915 of \$99,605 to which we have added an increase of \$3,812.50, being a ten per cent increase of the general expense for the year 1915, which makes a total for the year 1916 of \$103,417.50, or a total for the biennial of \$203,022.

You will find these amounts supported by a budget in the report of the Comptroller, Schedule V.

Public-Service Division.

Through the public-service division the University performs a very valuable function to the State. These functions are well enough understood by a listing of the names of the several departments contemplated.

After a careful consideration of the expenditures for the last biennial and of the demands upon these departments for the biennial ensuing, we recommend that the Legislature provide for this department a sum of \$54,587, which shall be distributed among the several departments, approximately as follows:

State Analytical Laboratory.....	\$5,000
State Hygienic Laboratory.....	10,000
State Veterinary Control.....	12,000
Food and Drug Control and Weights and Measures.....	14,000
Soil Laboratory.....	2,000
Smith-Lever Extension.....	4,587
Experiment Station.....	2,000
Engineering Experiment.....	5,000
Making a total of.....	\$54,587

We request that the appropriation be a block appropriation rather than appropriations for each of the several departments of the public-service division. The estimated needs of each of these departments is listed above and is supported by budgets which appear in the report of the Comptroller as Schedule W.

There is no necessity of explaining to the Legislature and the people of this State the value of the service performed by these departments. We believe if you will examine carefully the schedules given you will see that they have been efficiently managed, and the money requested is necessary in order to perform the duty imposed upon us by these departments.

Serological Laboratory.

It has been pointed out to us by the members of the Cattle Owners' Association of the State that it is advisable that every precaution should be taken that the problem of the control of contagious diseases in this State might be most efficiently administered. The experience of those who have had the control of these contagious diseases in charge has indicated the wisdom of establishing in connection with the Veterinary Depart-

ment, which has this matter in charge, of a Serological Laboratory, in which the various serums, vaccines, etc., necessary for the control of these diseases shall be manufactured, in order that the stock owners may have at their command serums and vaccines of known worth and merit. We, therefore, recommend in the interest of all the stock owners of the State, that there be appropriated by the Legislature a fund of \$3,000, which shall be used for the support of this laboratory.

Evans's Land.

During the last biennial a tract of land adjoining the University Campus was placed upon the market. The Regents felt that since this land adjoins the University Campus and separates this campus from the University Experimental Farm, that it would be unfortunate if it should fall into other hands than the University. They, therefore, sought permission of the State Board of Examiners to create a deficiency for the purchase of this land. The consent was given, and we therefore request that the Legislature appropriate the sum of \$7,837.50 to satisfy this obligation.

State Normal School.

We have observed for a number of years the inadequacy of equipment on the part of the State for the training of teachers for our public schools. We consider it the primary duty of the State to provide for its children the very best teachers. We believe the recommendation of the President and State Board of Education for the establishment of an interrelation of State Normal School and County Normal School and the State University will result not only in the better training of our teachers, but in securing more of our native sons and daughters for teachers in our elementary schools. In the carrying out of this plan it is necessary that the State Normal School should now be established, as by law it is a department of the State University, and that the State should grant an appropriation which may make the beginning at least of a first-class Normal School possible during the next two years. We are asking, therefore, for a definite appropriation of \$10,000 with a view of carrying out this work. This recommendation is made with the knowledge that it meets with the approval of the school men of the State.

Summer School.

There has been conducted in connection with the University for the past several years a summer school. This has been of great value to the rural teachers and to others who desire to increase their efficiency or raise the standard of their certificate. That it has met a need has been evidenced by the fact that it has been well attended. Its continuance is likewise recommended by the State Board of Education and the State Superintendent, and we, therefore, ask the Legislature for the sum of \$4,000 for its maintenance during the biennial.

University Campus.

Through the action of friends of the University in years past who desired to provide a home for the late President upon the University Campus, a transaction was entered into which leaves a cloud upon the title of a portion of the University Campus, which we feel should most certainly be removed. We, therefore, recommend that the sum of \$10,000 be appropriated to take up the claims of those who claim an interest in

this property, with the stipulation that their claims must be presented within two years of the date of the passage of this appropriation.

Building for the College of Agriculture.

We have given much consideration to the needs of the University in its Department of Agriculture, and we concur most heartily in the recommendation of the President, which you will find farther on in this report.

Through this department, the University offers an unusual service to the State. The state's future is really wrapped up in the solution of the problems of agriculture peculiar to this State, and the University's Department of Agriculture has imposed upon it the obligation to be of much service in the solution of these problems. We have felt it wise to submit our views of the needs of the University in this regard to those who are interested directly in the industry of agriculture and stock raising in the State. We have uniformly found all of the same belief. At a joint meeting between the Governor of the State, the President and Board of Regents of the University, and the Executive Committee of the Cattle Owners' Association of Nevada, after a very searching investigation of the need and of the condition of the State, and the state's finances, the following resolution was adopted by the Executive Committee of the Cattle Owners' Association, which was concurred in most heartily by all those present:

RENO, NEVADA, February 6, 1915.

To the Governor and the Legislature of the State of Nevada.

GENTLEMEN: WHEREAS, It appears from a consideration of the future welfare of the State of Nevada, that to plan for the development of its agricultural industry is essential; and

WHEREAS, It appears to us to be the duty of the University of Nevada, through its College of Agriculture, to give thorough and reliable instruction in the economic production of crops and treatment of the different soils of the State of Nevada in such manner as to secure the largest returns from the land without impairing its fertility; to teach the principles of breeding and management of livestock, including the control of animal diseases; to give a thorough knowledge of the various breeds and market classes; to provide for an economic and satisfactory production of dairy goods, and explain the best methods of meeting existing market demands and of extending and developing trade in the agricultural products of the State; and

WHEREAS, In order to attain efficiency in these functions it is essential that laboratories of sufficient equipment and sufficient space should be supplied and that excellent men should have an opportunity to work out these problems; and

WHEREAS, The State University has not now any suitable quarters in which to house these various departments which are directly related to the Department of Agriculture: Therefore, be it

Resolved, That the Executive Committee of the Nevada Cattle Owners' Association, meeting this day in the office of the President, do hereby heartily endorse and urge upon the Governor and the Legislature of the State of Nevada the appropriation of \$80,000 to be used in the construction of an agricultural building at the State University, in which these essential functions so necessary to the agricultural industry of the State shall be performed efficiently.

Signed on behalf of the Cattle Owners' Association of Nevada:

W. H. MOFFATT, *President*.
D. STAUNTON, *Secretary*.

JOHN HENDERSON,
T. J. BELL,
JOHN B. GARAT,
R. C. TURRITTIN,
H. F. DANGBERG,
Executive Committee.

College Farm.

Likewise, the providing of a college farm for the use of the Department of Animal Husbandry in the University has received our most careful attention. Estimates of the cost and equipment, and stocking of such a farm have been submitted to us, and gone over in much detail. Preeminent in our decision have been two considerations:

1. The benefit which such a farm will be to the College of Agriculture in its Department of Animal Husbandry; and
2. The unlimited benefits which will accrue to the stock industry of the State through the providing of such a farm.

In the President's report you will read of this in more detail.

This matter was likewise discussed in the joint meeting referred to above and the following resolution was passed by the Executive Committee of the Cattle Owners' Association, and was concurred in by all present.

RENO, NEVADA, February 6, 1915.

To the Governor and Legislature of the State of Nevada.

GENTLEMEN: WHEREAS, The Executive Committee of the Cattle Owners' Association has given consideration to the problem, the help which the University can grant to the stock industry of the State; and

WHEREAS, The Executive Committee of the Cattle Owners' Association believe that the services to the stock industry by the State University will be benefited by the building of an Agricultural Building; and

WHEREAS, It is the belief of this association that there is a necessity for supplementing the theory and science of agriculture given at the University by proper application of those theories on an agricultural farm; and

WHEREAS, The University does not now possess such a farm of such proportions and of such equipment as to permit of the application of the scientific knowledge of the Department of Agriculture; and

WHEREAS, The Executive Committee of the Cattle Owners' Association believe that the welfare of the State and of the stock industry will be greatly benefited by supplying to the University such a farm: Therefore, be it

Resolved, That the Executive Committee of the Cattle Owners' Association, assembled in the office of the President, do urge upon the Governor and Legislature of the State of Nevada, the appropriation of \$70,000 to be used for the purchase of a suitable farm, its equipment and stocking; and, further, whereas it may be felt that in the granting of an appropriation for the College of Agriculture, and in addition the appropriation for the College Farm, that the amount is too great a burden on the State in the next biennial, then the Executive Committee of the Cattle Owners' Association recommends that in the event of this feeling prevailing in the Legislature, that there be granted to the Board of Regents of the State University of Nevada, permission to lease such a suitable farm for the purposes of the University's Department of Agriculture, and that provision be made by law authorizing this lease, with the understanding that the farm shall be equipped out of other funds of the University with buildings, etc., sufficient for the needs of the biennial, and that the next Legislature make provision for its purchase.

W. H. MOFFATT, *President*.
D. STAUNTON, *Secretary*.

JOHN HENDERSON,
T. J. BELL,
JOHN B. GARAT,
R. C. TURBITTIN,
H. F. DANGBERG,
Executive Committee.

We therefore recommend that provision be made after one of the two plans submitted in this resolution to provide the University with a College Farm. If you conclude to purchase a farm, we ask for an appropriation

of \$70,000; if you conclude to authorize the Board of Regents to lease a suitable farm, we ask for an appropriation of \$10,000.

It is the recommendation of this Board of Regents that the appropriation for the College Farm, whether for either of these plans, should have incorporated with it the stipulation that the money shall be spent with the advice of a committee appointed by the Governor from the members of the Cattle Owners' Association of Nevada.

Regents' Contingent Fund.

We desire the continuance of the fund given the Regents in previous years to cover emergencies, and therefore recommend that the Legislature appropriate for this purpose the sum of \$5,000.

Respectfully submitted,

H. E. REID, *Chairman*,
CHAS. B. HENDERSON,
WALTER E. PRATT,
A. A. CODD,
JAS. W. O'BRIEN,
J. J. SULLIVAN,

Board of Regents.

REPORT OF THE PRESIDENT

OFFICE OF THE PRESIDENT, UNIVERSITY OF NEVADA,
RENO, February 10, 1915.

To the Honorable Board of Regents:

I have the honor to submit to you a summary of the work of this University during the past biennial and to make statement to you of the needs of the University for the next biennial. It is, of course, known to you that in the making of this summary, I must rely upon the records of the University and upon the statements of the heads of the various colleges for the information and data from which this report is made.

In order that yourselves and the people of the State may have a more definite understanding of the work which the University is doing, I am appending to my report reports of the Deans of the various colleges. In addition there is a report by the Director of the Experiment Station, the Librarian, the Director of the State Analytical Laboratory, and also reports of the various public service divisions of the University.

UNIVERSITY PROGRESS

University progress during the past two years has been marked in several distinct directions. Generally, I should say the educational efficiency of the University has been increased by the establishment of new administrative relations, particularly in the election of Deans, who are to preside over the activities of the several distinct colleges.

THE BUSINESS OFFICE

But probably what is most to be approved is a satisfactory handling of the college moneys by which the funds of the University have been made more directly applicable to the purposes and needs of the University. This has been done by the establishing of a well-regulated business office, with a Comptroller in charge, who understands very thoroughly the purposes for which the funds are to be devoted, and through his guidance the President's office has been able to administer these funds more efficiently for the welfare of the University.

Because of the fact that the University administers several federal funds which are hedged about by certain federal regulations, which give point to the use of these funds, and which regulations specifically prohibit their use in the operations of the University, which it is expected shall be supported by the State, the administering of the college funds becomes somewhat complicated and demands of the business office intelligence and understanding of the University problems.

There is also imposed upon the business office the study or supervision of the University revenue from various funds, and an alert, well organized business office has been able to save to the University many thousands of dollars which might otherwise have been lost. There is still much work to do in the matter of discovery of the actual property of the University in the public lands which were given the State by the Federal Government for the support of the University. The money derived from these lands was to be placed in separate irreducible funds. The amount of

these funds at the present time is 90,000-Acre Grant—\$107,763.84—and 72-Section Grant—\$48,670.40. It seems it is essential that the Board of Regents should discover how these funds were made up, and that the Comptroller's office of the University should be given such assistance as would permit him to devote a considerable portion of his time to the discovery of the actual sources of the University's permanent funds and what their amount is.

This is not done as a matter of criticism of any of the State Departments, but because of the statement which has been made to me that no one knows actually how this fund has been made up and what the condition of the Federal Land Grant for the support of the University is.

JOSEPH EDWARD STUBBS

1850 - 1914

President of the University Since 1894

It becomes my sad duty to narrate, as part of this report, the death of my predecessor, who was President of the University from 1894 until May 27, 1914. Having never been privileged to know him personally, I have asked a member of the faculty who has served here during most of his presidency, and who was intimately associated with him both socially and educationally, to make statement for me and write an appreciation of his life and service. I, therefore, submit at this point a statement prepared by Professor J. E. Church, Jr.:

The Regents desire in this public manner to record their appreciation of the life and services of Joseph Edward Stubbs, who died Wednesday, May 27, 1914, while completing the twentieth year of his presidency at the University.

As it was said of Sir Christopher Wren, who founded St. Paul's Cathedral, London, so can it be said of President Stubbs by those who dwell upon the Campus of the University of Nevada, "If you seek his monument, look about you" Regents come and go, but the President abides. The continuity of purpose, therefore, is his although the advice and restraining influence are theirs.

In 1894, President Stubbs relinquished the presidency of Baldwin University, which he had placed financially upon its feet, being in his native State of Ohio, where high academic honors had been conferred upon him, to share the pioneer life of Nevada and shape its educational ideals.

From the day of his entry into the presidency, the rapid development of the University began. Realizing that the physical welfare of the students was of first importance, he immediately requested an appropriation for commodious dormitories for men and women. The proposal was startling in those days when the fortunes of the State were at their lowest ebb, but the members of the Legislature caught the spirit of larger things and generously responded. Since that time twelve buildings have been erected on the Campus, most of them through his initiative. To his endeavors also must be ascribed the numerous gifts of Clarence H. Mackay and his mother, which now exceed in amount the total contributions of the State.

With like energy he extended the departments and courses at the University, raising the institution almost at a bound from high school to university grade. To bridge the gap thus created between the University and the sparsely settled districts of the State, he established a University High School on the Campus.

To the School of Mines he added other schools of mechanical, civil and electrical engineering, but beyond this close unity of University schools he would

not go, for he felt that sufficient demand had not yet arisen for the maintenance of professional schools, such as law and medicine.

To promote the practical service of the University to the State, he established the departments of animal husbandry, veterinary science, range and forage studies, and others.

Such growth as this required funds and most careful planning to make every source of income serve the University to its fullest extent. It is said by those nearest to him that in those days the President "sweat blood" over the financial problems of the growing University. This was accentuated by his optimism which led him to make plans larger than his funds—a virtue where projects rather than persons are concerned. For years he maintained the University dining hall at his own financial risk, and of his personal income at each year's end little was left save the amount invested in life insurance for his family.

To his faculty he was an elder brother rather than a superior, directing with persuasive yet firm hand. He fostered initiative by displaying his hearty sympathy for every endeavor and his enthusiasm for every success. Realizing that lack of competition endangers progress, he heartily supported the plan of granting "leave of absence," and the publication of the University of Nevada studies to bring the University into closer touch with other institutions.

The problems of reducing student expenses he met at the very outset by extending the system of student labor far beyond that provided at most universities, and by establishing a series of annual scholarships maintained by the President, Regents and friends for deserving students, as well as for those who excelled in their studies.

In his larger service to education he aided in the investment of the public school funds with a view to increase their earnings without diminishing the security. In 1899 he was honored to the presidency of the Association of American Agricultural Colleges and Experiment Stations, and in his retiring address, "What is Most Worth While in Modern Education," he urged the union of training for service and of culture for life. Many other appointments fell to his hands. In fulfilment of one of these he presented a paper on "The Solution of the Problem of the Small Farmer and the Range," which was highly praised by Gifford Pinchot as a possible solution of a vexing question.

In 1912-13, while on leave of absence at Oxford University in fulfilment of a long deferred plan to extend his studies in ethics, he served as a member of the American Committee appointed to study the question of rural credits, now approaching early consideration by Congress.

In personality President Stubbs was dignified, yet engaging. In method he was diplomatic rather than aggressive. In industry he was unflagging, and in outlook progressive. In spirit he was tranquil, even when suffering most keenly under criticism. His home life was ideal.

In 1900 he received a call to the presidency of one of the large universities of the Middle West, but owing to strife regarding the selection of his successor, he generously relinquished the opportunity of a life time and returned to aid in reestablishing the University.

He had planned to retire in 1915 when, having attained the age of sixty-five, he would have been eligible to retirement with pension from the Carnegie Foundation. But while he was busily engaged in concluding his work and was looking forward with keen anticipation to the larger work that waited his successor, death came suddenly upon him.

Great credit is due President Stubbs for long years of definite, earnest, and determined effort in establishing the University in its formative period, and the State owes his memory a debt of gratitude difficult to repay.

President Wheeler at the National Association of State University Presidents of the United States of America, at Washington, D. C., November, 1914:

I cannot stand here without saying just one word about my colleague, President Stubbs, my neighbor, my friend, who has gone out into the other world from a life keenly and honestly given to high endeavor. He was an upright, clean, strong man, and the work that he did up there in Nevada, on what many of us have thought were the desert steppes, will live long after him. That University is a monument to him. The man that comes in after him will find he has a strong foundation there. Foundations are laid in the respect which that University enjoys in the minds and vision of the people of Nevada and of all the people of the Coast States. He lived to do a very straightforward, clean, noble work, and all of us, presidents and officials of State Universities, have keen reason to be thankful that that man ever was.

It is proper also at this point that some recognition should be given of the service to the State by the widow of the late Dr. Stubbs. Mr. Clarence Mackay, through whose generosity the University now enjoys one of the best mining schools in the country, expressed to your President his wish that the State might make some recognition of Mrs. Stubbs and her sacrifice to this State by providing for her during the remainder of her days a moderate allowance; and he commissioned your President to present this matter to yourselves and to request that you should make a request upon the Governor and Legislature of this State for this allowance.

Under the circumstances a request coming from Mr. Mackay, it seems to me, should receive grateful recognition at the hands of yourselves and of this State.

RESIGNATIONS

There have been during the last biennial the following resignations from the faculty:

Professors

G. H. TRUE, B.S., Professor of Animal Husbandry and Director of the Experiment Station; resigned June 30, 1913.

W. S. T. SMITH, Ph.D., Professor of Geology and Mineralogy; resigned June 30, 1913.

E. A. HOWES, B.S., Professor of Agronomy and Agronomist in the Experiment Station; resigned June 30, 1913.

GEORGE J. YOUNG, B.S., Professor of Mining and Metallurgy; resigned September, 1913.

P. B. KENNEDY, Ph.B., Professor of Botany, Horticulture and Forestry, and Botanist in the Experiment Station; resigned December 31, 1913.

Associate Professor

O. P. JOHNSTONE, M.D., Associate Professor of Physiology and Hygiene; resigned June 1, 1914.

Assistant Professors

A. A. HELLER, Sc.D., Assistant Professor of Botany, Horticulture, and Forestry; resigned June 30, 1913.

S. E. ROSS, B.S., Assistant Professor of the Chemistry and Physics of Soils; resigned October 1, 1914.

Instructors and Assistants

L. T. SHARP, B.S., Instructor in Agronomy (Soils); resigned July 15, 1913.

E. R. VON JANINSKI, B.A., Instructor in German; resigned July, 1913.

G. S. PAINE, M.A., Instructor in English; resigned September 1, 1913.

F. L. PETERSON, B.S., Instructor in Irrigation and Farm Mechanics; resigned December 31, 1913.

A. W. ELLIOTT, B.S., Instructor of Physical Education for Men; resigned June 30, 1914.

C. L. BROWN, M.A., Assistant in Biology; resigned June 30, 1914.

M. B. KENNEDY, Deputy Commissioner Food and Drugs Control and Deputy Sealer of Weights and Measures; resigned September, 1914.

LEAVE OF ABSENCE

The Board of Regents also authorized leave of absence to the following members of the faculty to pursue studies as indicated:

DR. MAXWELL ADAMS, Professor of Chemistry, Sabbatical leave from January 1, 1914-July 1; study in Europe.

DR. GEORGE ORDAHL, Professor of Education and Psychology, leave from September, 1914, to September, 1915; for study.

GEORGE D. POWERS, Assistant Professor of Mechanical Engineering, leave of absence from December, 1914, to July 1, 1915; account ill health.

APPOINTMENTS

There have been during the biennial appointed upon the faculty the following:

CHARLES S. KNIGHT, B.S., University of Wisconsin, 1907; appointed Professor of Agronomy, September 1, 1913.

DWIGHT BRUNEL HUNTLEY, Ph.B., University of California, 1875; appointed acting Professor of Mining and Metallurgy, September, 1913.

FRANCIS CHURCH LINCOLN, S.B., Mining Engineering, Massachusetts Institute of Technology, 1900; A.M., Columbia University, 1907; Ph.D., Columbia University, 1911; appointed Professor of Mining and Metallurgy, July, 1914.

FREDERICK WESTON WILSON, B.S., Kansas State Agricultural College, 1905; appointed Professor of Animal Husbandry, July, 1914.

MARK F. BOYD, M.D., University of Iowa, 1911; M.S., University of Iowa, 1913; appointed Associate Professor Bacteriology and Hygiene, June, 1914.

ALBERT ELLSWORTH HILL, A.B., University of Chicago, 1899; appointed Assistant Professor of the English Language and Literature, July, 1913; Associate Professor, July, 1914.

ROSALIE POLLOCK, B.Di., in Education (supervision), Teachers' College, Columbia University, 1901; B.S., Columbia, 1909; appointed Assistant Professor of Education, August, 1913.

SILAS EARL ROSS, B.S., University of Nevada, 1909; appointed Assistant Professor of the Chemistry and Physics of Soils, September, 1913.

PHILIP AUGUSTUS LEHENBAUER, A.B., Westminster College; A.M., Milliken University, 1909; Ph.D., University of Illinois, 1914; appointed Assistant Professor of Botany and Horticulture, July, 1914.

JEROME B. FRISBEE, B.S., Iowa State College, 1895; appointed Assistant Professor of Agronomy, September, 1914.

ELSIE SAMETH, A.B., Cornell, 1909; B.S., Columbia, 1911; appointed Instructor, Physical Education for Women, January 1, 1913.

ARCHIBALD EDWARDS TURNER, A.B., Nebraska Wesleyan University, 1895; appointed instructor in Public Speaking, July, 1913.

MARGARET ELIZABETH MACK, B.S., University of Nevada, 1910; A.M., (Biology) Columbia University, 1913; appointed instructor in Biology, July, 1913.

KATHERINE RIEGELHUTH, A.B., University of Nevada, 1897; A.M., Columbia University, 1913; appointed instructor in German, July, 1913.

MAUDE DENNY, Music Student Lincoln College, 1904-5; Student, Bush Temple Conservatory, Chicago, 1906; B.M., University Illinois, 1913; appointed instructor in Music, July, 1913.

SILAS CALVIN FREEMSTER, A.B., Drury College, 1907; A.M., University of Nebraska, 1912; appointed Assistant in History and Political Science, July, 1913.

EDWIN EUGENE WILLIAMS, B.S., University of Nevada, 1912; appointed Assistant in Department of Chemistry, July, 1913.

AUGUST HOLMES, B.S., University of Nevada, 1912; Fellowship, Johns Hopkins University, 1913; appointed Assistant in Department of Research Chemistry, July, 1913.

JOHN BLAIR MENARDI, B.S., University of Nevada, 1914; appointed Assistant in Department of Agronomy (Experiment Station), July, 1914.

NORMA J. DAVIS, B.S., University of Wisconsin, 1913; appointed Field Worker in Extension, Department of Home Economics, September, 1914.

EDWARD RECORDS, V.M.D., University of Pennsylvania, 1909; appointed Assistant in Department of Veterinary Science and Bacteriology, December, 1914.

STEPHEN LOCKETT, V.M.D., University of Pennsylvania, 1906; appointed Assistant in Department of Veterinary Science and Bacteriology, December, 1914.

J. R. GLASCOCK, appointed Coach for Athletic Teams, September 9, 1914; reappointed for second semester, December, 1914.

E. HAROLD MOSHER, A.B., Stanford University, 1913; appointed Instructor in Department of Chemistry, January, 1915.

JAMES A. NYSWANDER, B.S., University of California, 1913; appointed Instructor in the Department of Mathematics, January, 1915.

C. P. CAMPBELL, A.B., Stanford University, 1913; appointed Instructor in the Department of Mechanical Engineering, February, 1915.

PUBLICATIONS OF THE FACULTY

Maxwell Adams

April, 1913—Pine-Nut Oil, by M. Adams and August Holmes. *Journal of Ind. and Eng. Chemistry*, vol. 5.

May, 1914—Wood Distillation Under Diminished Pressure. A contribution to the problem of utilization of wood waste, M. Adams and Charles R. Hilton. *Journal of Ind. and Eng. Chemistry*, vol. 6, p. 378.

Romanzo Adams

Jan. 1913—First seventeen pages of the Report of the Citizens' Economy and Taxation Committee.

Jan. 1914—A Review of the Tariff Act of 1913. Read before the Men's Club of the Baptist Church and published in the Nevada State Journal.

Sept. 1914—Agricultural Credit. Read before the Nevada Bankers' Association and published in the American Banker.

April, 1914—A series of three addresses entitled the Home Side of Education and delivered before the Mothers' Club of the Mary S. Doten School, the Mothers' Club of the South Side School, and published in the Nevada School Journal, February, March and April, 1914.

J. E. Church, Jr.

Feb. 1913—The Conservation of Snow: Its Dependence upon Mountains and Forests (Reprint). *Engineering and Contracting*, XXXIX. 6.

Oct. 1913—The Relative Efficiency of Talus Slopes in Conserving Snow for Irrigation. *Engineering and Contracting*, XL. 16.

Jan. 1914—Recent Studies of Snow in the United States. *Quarterly Journal of the Royal Meteorological Society*, XL. 169. (England.)

June, 1914—The Retarding Effect of Various Types of Forests on the Sudden Melting of Snow. *Engineering Record*, 69, 24.

Jan. 1913—Das Verhältniss des Waldes und des Gebirges zur Erhaltung des Schnees. *Meteorologische Zeitschrift*, XXX. 1.

Jan. 1914—Das Verhältniss des Waldes und des Gebirges zur Erhaltung des Schnees (reprinted in part and reviewed), *Petermann's Geographische Mittheilungen*; Klein, Jahrbuch, XXIV.

SNOW SURVEYING AND FORECASTING WATER FOR IRRIGATION

Jan. 1914—The Snow Survey of the Tahoe Basin: A Study in the Rapid Surveying of Large Areas of Snow at High Elevations (accepted for publication). Engineering Record.

Occasional Bulletins containing results of snow surveys and forecasts of summer levels of Lake Tahoe. Nevada State Journal and Reno Evening Gazette.

THE MOUNT ROSE WEATHER OBSERVATORY

The Progress of Mount Rose Observatory, 1906-1912 (reprint). Jahresbericht des Sonnblick-Vereines fur 1912 (Austria).

A Mount Rose Weather-observatoriumbol (reprint). Az Idojaras, June, 1914 (Hungary).

Mount Rose Observatory, 1906-1912 (reprint). Davis, History of Nevada. Vol. II.

THE AVOIDANCE AND PREVENTION OF FROST

Temperature Surveys

Mar. 1914—Keeping the Frost Away from the Fruit: The Orchard Should be Well Selected and Then Protected if It Is to Pay Dividends. Farm and Fireside.

Feb. 1913—Trailing the Frost Belt Through Nevada Snows. Popular Mechanics.

Mar. 1913—A Substitute for the Compass in Snow Storm or Fog. Scientific American.

June, 1914—Shellac as Waterproofing for Rubbers and Snowshoes. Scientific American.

June, 1914—The Mount Rose Snow-Sampler and Weigher. Scientific American.

S. P. Fergusson

April, 1913—The Relation of Snow to Irrigation and Forestry. Science Conspicuous.

J Claude Jones

1913—The Barth Iron Ore Deposit. Economic Geology, vol. 8. Geological Society of America Bulletin, vol. 34.

1913—Geology of Rochester, Nevada. Mining and Scientific Press, vol. 106.

1914—Occurrence of Stibnite and Metastibnite at Steamboat Springs, Nevada. Geological Society of America Bulletin, vol. 25.

1914—The Tufa Deposits of the Salton Sea. The Salton Sea. Carnegie Institute of Washington Pub. no. 193.

1913—Origin of Travertine or Tufa Deposits of Salton Sink. Carnegie Institute of Washington Year Book no. 12.

1914—The Geologic History of Lake Lahontan. Science, new series, vol. 40.

Peter Frandsen

Jan. 1913—Nature and Causes of Infectious Diseases. University of Nevada Bulletin, vol. 7, no. 1.

April, 1913—Needs and Methods of Education in Sex Hygiene. Special report of American Federation for Sex Hygiene.

Jan. 1914—First Aid to the Injured. University of Nevada Bulletin, vol. 8, no. 1. Studies on the Potato Eel-Worm, by C. L. Brown, submitted as a Thesis for the Degree of Master of Arts under direction of Professor Frandsen. University of Nevada Bulletin, vol. 8, no. 2.

Brief reports on Fungus Disease of Carolina Poplar (*Cytospora nevada*) and Fusarium Wilt of Tomatoes, etc. Nevada Experiment Station Annual Reports for 1913 and 1914.

H. W. Hill

Dec. 1913—The Harmonizing of Esthetic Interests with the Commercial Tendencies of the Times. English Journal.

C. A. Jacobson

Aug. 1912—Methods for determining Neo- and Allo-chlorophyll in the presence of one another, by C. A. Jacobson and L. Marchlewski. American Chemical Journal, vol. 48.

- Sept. 1912—A delicate method for determining minute quantities of chlorophyll. *Journal of the American Chemical Society*, vol. 34.
- Sept. 1912—On the coloring matters in alfalfa, *Alfalfa Investigation 3*. *Jour. Amer. Chem. Soc.* vol. 34.
- Dec. 1912—Enzymes present in alfalfa, *Alfalfa Investigation 4*. *Jour. Amer. Chem. Soc.* vol. 34.
- June, 1914—Local poisonous plants. *Better Farming*, University of Nevada.
- Oct. 1914—Enzymes present in alfalfa, *Alfalfa Investigation 5*, by C. A. Jacobson and August Holmes. *Jour. Amer. Chem. Soc.* vol. 36.
- Dec. 1914—Manuscript completed and sent to the publishers on the following subject: Water Hemlock (*Cicuta*). *Journal American Chemical Society*.

P. A. Lehenbauer

- 1914—Growth of Maize Seedlings in Relation to Temperature. *Physiological Researches* vol. 1.

Jeanne Elisabeth Wier

- Third Biennial Report of the Nevada Historical Society. Bound volume.
- Oct. 1914—Some Suggestions for Public School Celebration of Nevada's Semi-Centennial of Statehood. Pamphlet.
- Oct. 1914—Article on the Nevada Historical Society for the Davis History of Nevada.
- Newspaper Article: Mementos of Nevada's Olden Days and the work of the Nevada Historical Society, Trustee of the State of Nevada. Semi-Centennial edition of the *Reno Evening Gazette*, October 30, 1914.
- The Pageant of Nevada History in Celebration of Nevada Statehood. Folder Programs of the Pageant, July 2, and October 29, 1914. Order of Procession.
- Folder Program of the Semi-Centennial Celebration of Nevada Statehood; invitation to attend Semi-Centennial Celebration.
- Numerous brief newspaper articles.

LIST OF COURSES GIVEN DURING SECOND SEMESTER 1912-1913

<i>Courses</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. wk.</i>	<i>M.*</i>	<i>W.</i>	<i>T.</i>
				<i>Lec.</i>	<i>Lab.</i>		
Agronomy 26.....	F. L. Peterson.....	Farm Mechanics.....	3	3	0	7	0
28.....	F. L. Peterson.....	Irrigation.....	5	5	0	7	0
Animal Husbandry 1.....	G. H. True.....	Breeds of Live Stock.....	4	1	12	0	12
Art 1.....	K. Lewers.....	Drawing and Painting.....	2	0	2	2	19
5a.....	K. Lewers.....	Teachers' Course.....	1	0	2	0	8
5b.....	K. Lewers.....	Teachers' Course.....	1	0	2	0	8
Biology—Botany 1.....	P. Frandsen.....	Structural Botany.....	4	2	2	18	4
Hygiene 1.....	P. Frandsen.....	Human Anatomy.....	4	2	2	2	22
Zoology 2.....	P. Frandsen.....	Composition Anatomy.....	5	3	2	2	1
23.....	P. Frandsen.....	Histology.....	5	3	2	4	1
Chemistry 1.....	E. E. Williams.....	Elementary Chemistry.....	2	2	0	16	3
2.....	E. E. Williams.....	Elementary Chem., Lab.....	2	0	2	11	3
3.....	M. Adams.....	Inorganic Chemistry.....	2	2	0	36	0
4.....	E. E. Williams.....	Inorganic Chem., Lab.....	2	0	2	26	0
6.....	M. Adams.....	Volumetric Analysis.....	3	0	3	9	2
23.....	M. Adams.....	Technical Analysis.....	2	0	2	3	1
27.....	M. Adams.....	Organic Chemistry.....	2	2	0	5	2
28.....	M. Adams.....	Organic Chemistry, Lab.....	2	0	2	3	1
29.....	M. Adams.....	Agricultural Chemistry.....	2	0	2	3	1
80.....	M. Adams.....	Agricultural Chemistry.....	2	2	0	2	0
Civil Engineering 21.....	H. P. Boardman.....	Plane Surveying.....	4	2	2	10	0
24.....	H. P. Boardman.....	Structural Design.....	5	1	4	3	0
29.....	H. P. Boardman.....	Graphics.....	4	2	2	5	0
29a.....	H. P. Boardman.....	Graphics, Advanced.....	2	0	2	1	0
26.....	H. P. Boardman.....	Sewerage.....	2	2	0	2	0
27.....	H. P. Boardman.....	Masonry Construction.....	2	2	0	3	0
33.....	H. P. Boardman.....	Reinforced Concrete.....	3	2	1	3	0
34.....	H. P. Boardman.....	Water Power Eng.....	3	3	0	7	0
35.....	H. P. Boardman.....	Rural Engineering.....	4	2	2	3	0
36.....	H. P. Boardman.....	Engineering Literature.....	1	1	0	3	0
40.....	H. P. Boardman.....	Thesis.....	1	0	3	3	0
Chemistry 60.....	M. Adams.....	Thesis.....	4	0	4	1	0
Dairying 1.....	V. E. Scott.....	Dairying.....	3	1	2	12	0
Drawing 1.....	K. Lewers.....	Freehand.....	2	0	2	4	0
3.....	A. W. Preston.....	Mechanical.....	3	0	3	29	0
3a.....	H. P. Boardman.....	Map drawing.....	1	0	1	2	0

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, SECOND SEMESTER, 1912-1913—Continued

Course	Instructor	Title of course	Hrs. credit	Hrs. pr. wk. Lec. Lab.	M.*	W.	T.
Drawing 4	G. D. Powers	Descriptive Geometry	3	1 2	16	0	16
26	J. G. Scrugham	Steam boiler design	1	0 1	13	0	13
28	J. G. Scrugham	Adv. Boiler design	2	0 2	6	0	6
Economics 2	R. Adams	Economic Geography	2	2 0	17	11	28
6	R. Adams	Money and banking	3	3 0	5	1	6
Education 1	G. Ordahl	Science of Education	4	3 1	0	9	9
3	G. A. Day	Theo. and Prac. of Tchng.	5	5 12	1	19	20
5	G. Ordahl	Child and Adolesc. Psych.	2	2 0	0	14	14
7	G. Ordahl	Child Literature	1	1 0	0	12	12
Elect. Engineering 1	J. G. Scrugham	Elect. Engineering	2	2 0	29	0	29
22	J. G. Scrugham	Alternating Currents	3	3 0	3	0	3
27	J. G. Scrugham	Electric Power Plants	2	2 0	13	0	13
24	G. D. Powers	Electric Railways	2	2 0	7	0	7
25	G. D. Powers	Electric Laboratory	2	0 2	10	0	10
26	G. D. Powers	Electric Laboratory Test	3	0 3	7	0	7
English 1a	G. S. Paine	Comp. and Rhetoric	3	3 0	25	17	42
1b	G. S. Paine	Comp. and Rhetoric	3	3 0	26	16	42
1c	G. S. Paine	Comp. and Rhetoric	3	3 0	14	8	22
2b	G. S. Paine	Comp. and Rhetoric Adv.	2	2 0	3	4	7
4	H. W. Hill	History English Lit.	3	3 0	4	14	18
25	H. W. Hill	Nineteenth Cent. Lit.	3	3 0	1	17	18
30	H. W. Hill	Beowulf	3	3 0	0	5	5
32	H. W. Hill	The Novel	2	2 0	0	9	9
40	H. W. Hill	Thesis	1	1 0	0	5	5
French 1	L. de Laguna	Beginning French	3	3 0	2	11	13
2	L. de Laguna	Translation	3	3 0	0	17	17
24	L. de Laguna	Poetry	2	2 0	1	10	11
25	L. de Laguna	Modern Prose	2	2 0	0	7	7
26	L. de Laguna	Advan. Prose Comp.	1	1 0	0	13	13
Geology 1c	J. C. Jones	Elementary Geology	2	2 0	12	0	12
21b	J. C. Jones	General Geology	2	2 0	8	4	12
22	J. C. Jones	Elemnt. Petrology	2	2 0	2	0	2
23a	J. C. Jones	Petrography	1	1 0	3	0	3
23b	J. C. Jones	Petrography Lab.	1	0 1	1	0	1
24a	J. C. Jones	Field Geology	1	0 1	2	0	2
26	J. C. Jones	Physiography	2	2 0	0	10	10
German 1	E. R. vonJaninski	Grammar	3	3 0	3	13	16
2	E. R. vonJaninski	Prose	3	3 0	1	14	15
10	E. R. vonJaninski	Scientific German	2	2 0	6	4	10
22	E. R. vonJaninski	The Novel	3	3 0	2	5	7
24	E. R. vonJaninski	19th Century Drama	3	3 0	1	3	4
40	E. R. vonJaninski	Faust	2	2 0	1	1	2
Greek 2	J. C. Watson	Grammar and Anabasis	5	5 0	1	3	4
4	J. C. Watson	Homer	3	3 0	2	1	3
25	J. C. Watson	Plato	3	3 0	0	1	1
40	J. C. Watson	Thesis	1	1 0	0	1	1
6	J. C. Watson	Prose Composition	2	2 0	2	1	3
History 1	J. E. Wier	Medieval	3	3 0	30	14	44
2	J. E. Wier	Modern	2	2 0	9	10	19
3	J. E. Wier	Woman in History	1	1 0	0	25	25
23	J. E. Wier	English Constitution	2	2 0	3	2	5
29	J. E. Wier	French Revolution	2	2 0	3	24	27
31	J. E. Wier	Prins. & Prac. Politics	2	2 0	5	1	6
33	J. E. Wier	Research	1	1 0	0	5	5
40	J. E. Wier	Thesis	1	1 0	0	2	2
Home Economics 1a	K. Bardenwerper	Textiles	1	1 1	0	42	42
2a	K. Bardenwerper	Food Values	1	1 1	0	29	29
3a	K. Bardenwerper	History Cookery	1	2 0	0	3	3
4a	K. Bardenwerper	Sanitation	1	2 0	0	9	9
5a	K. Bardenwerper	Lecture Course	1	1 0	0	12	12
1b	K. Bardenwerper	Food Values	1	1 1	19	0	19
2b	K. Bardenwerper	Food Values	1	1 1	8	0	8
Horticulture 1	P. B. Kennedy	General Horticulture	3	2 1	6	0	6
Forestry 1	A. A. Heller	Dendrology	3	3 0	5	0	5
Forestry 2	A. A. Heller	Elementary Forestry	3	3 0	1	0	1
Latin 5	J. C. Watson	Vergil	3	3 0	1	6	7
D	R. C. Thompson	Vergil	3	3 0	2	3	5
Latin 2	R. C. Thompson	Horace	3	3 0	1	6	7
3	R. C. Thompson	Prose Composition	1	1 0	1	6	7
23	R. C. Thompson	Livy	3	3 0	0	1	1
25a	J. E. Church	Art Masterpieces	1	1 0	0	3	3
40	J. E. Church	Thesis	1	1 0	0	1	1
45	J. E. Church	Rise of Epic Poetry	1	1 0	0	3	3
60	J. E. Church	Graduate Thesis	1	1 0	0	2	2
4	J. C. Watson	Plautus and Terence	3	3 0	1	0	1
Law 1	Robert Lewers	Elementary Law	3	3 0	9	1	10
2	Robert Lewers	International Law	3	3 0	1	2	3
Mathematics 2	C. Haseman	Solid Geometry	2	2 0	11	1	12
3	C. Haseman	Plane Trigonometry	3	3 0	19	4	23
7	C. Haseman	Analytical Geometry	3	3 0	20	2	22
9	C. Haseman	Integral Calculus	3	3 0	19	3	22
20	C. Haseman	Mechanics	3	3 0	7	0	7
26	C. Haseman	Advanced Calculus	2	2 0	2	1	3

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, SECOND SEMESTER, 1912-1913—Continued

<i>Course</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. wk.</i>	<i>Lab.</i>	<i>M.*</i>
Mechanical Eng. 2	G. D. Powers	Kinematics	2	1	1	19
23	G. D. Powers	Machine Design	2	2	0	18
23	G. D. Powers	Valve Gears	2	1	1	4
24	J. G. Scrugham	Steam Boilers	1	1	0	15
40	J. G. Scrugham	Thesis	1	0	2	4
Mechanic Arts 1	A. W. Preston	Wood Shop	1	0	1	6
2	A. W. Preston	Forge Shop	2	0	2	18
3	A. W. Preston	Machine Shop	2	0	2	30
4	A. W. Preston	Foundry	2	0	2	18
Military 1	H. LaF. Applewhite	Military Science, Tactics	1	4	--	21
2	H. LaF. Applewhite	Military Science, Tactics	1	4	--	42
3	H. LaF. Applewhite	Military Science, Tactics	1	4	--	43
Minerology 1b	J. C. Jones	Blowpipe Analysis	2	0	2	6
3	J. C. Jones	Descriptive Miner.	2	2	0	6
Mining 22	G. J. Young	General Mining	4	4	0	9
23b	G. J. Young	Mining Laboratory	2	0	2	6
26	G. J. Young	Contracts and Specific.	1	1	0	3
27	G. J. Young	General Metallurgy	2	2	0	6
29	G. J. Young	Copper, Lead and Zinc	4	4	0	6
36	G. J. Young	Conference	1	1	0	10
30	W. S. Palmer	Metallurgical Lab.	2	0	2	5
31b	W. S. Palmer	Assaying Lectures	1	1	0	9
32	W. S. Palmer	Assaying Laboratory	1	0	1	8
Music	M. Hallock	Teachers' Course	1	1	0	0
Physics 1	L. W. Hartman	General Physics	4	3	1	7
2	L. W. Hartman	General Physics	5	5	0	25
3	L. W. Hartman	Physical Measurements	2	0	2	21
21	L. W. Hartman	Elect. Measurements	1	0	1	3
22	L. W. Hartman	Thermodynamics	2	2	0	1
23	L. W. Hartman	History of Physics	1	1	0	1
Physical Education	Elsie Sameth	Physical Education	1	3	--	--
	2. Elsie Sameth	Physical Education	1	3	--	--
	3. Elsie Sameth	Physical Education	1	3	--	--
	4. Elsie Sameth	Physical Education	1	3	--	--
Psychology 1	G. Ordahl	General Psychology	4	3	1	5
22	G. Ordahl	Social Psychology	2	2	0	1
Spanish 21	L. deLaguna	Beginning Spanish	2	2	0	4
22	L. deLaguna	Reading, Conversation	2	2	0	0
Veterinary Science 21	W. B. Mack	Veterinary Science	5	5	0	8

LIST OF COURSES GIVEN DURING FIRST SEMESTER 1913-14

<i>Course</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. wk.</i>	<i>Lab.</i>	<i>M.*</i>
Accounting 12	Robert Lewers	Municipal Accounting	2	0	2	2
Agronomy 1	C. S. Knight	Elementary Agriculture	5	5	0	11
4	C. S. Knight	Farm Crops	3	0	3	15
25	S. E. Ross	Soils	3	3	0	3
27	C. S. Knight	Farm Management	5	5	0	6
Animal Husbandry 4	V. E. Scott	Stock Judging	5	0	5	9
Art 1	K. Lewers	Drawing and Painting	1	0	1	0
5a	K. Lewers	Teachers' Course	1	0	1	0
5b	K. Lewers	Teachers' Course	2	0	2	0
Biology—Botany 2	P. Frandsen	Algae and Fungi	4	2	2	2
26	P. B. Kennedy	Industrial Botany	3	2	1	1
40	P. B. Kennedy	Thesis	2	0	2	1
Hygiene 1	P. Frandsen	Human Anatomy	3	2	1	5
Zoology 1	P. Frandsen	General Zoology	4	2	2	11
5	P. Frandsen	Neurology	1	1	0	0
9	P. Frandsen	Anatomy of cat	3	0	3	1
Chemistry 1	S. E. Ross	General Chemistry	2	2	0	18
2	S. E. Ross	General Chemistry, Lab.	2	0	2	17
3	Maxwell Adams	Inorganic Chemistry	2	2	0	30
4	E. E. Williams	Qualitative Laboratory	2	0	2	42
5	M. Adams	Quantitative Lab.	3	0	3	6
Special	M. Adams		1	1	0	1
23	M. Adams	Technical Analysis	2	0	2	1
27	M. Adams	Organic Lecture	2	2	0	6
28	M. Adams	Organic Laboratory	2	0	2	6
29	S. E. Ross	Agricultural Chemistry	2	2	0	6
30	S. E. Ross	Agric. Chem., Lab.	2	0	2	6
40	M. Adams	Thesis	1	0	1	1
44	C. A. Jacobson	Physical Chemistry	2	2	0	3
46	M. Adams	History of Chemistry	2	2	0	5
Civil Engineering 21	H. P. Boardman	Plane Surveying	4	2	2	25
23	H. P. Boardman	Structural Analysis	2	2	0	1
25	H. P. Boardman	Railroad Engineering	3	3	0	6
28	H. P. Boardman	Hydraulics	2	2	0	8
29	H. P. Boardman	Graphics	2	0	2	17
29a	H. P. Boardman	Advanced Graphics	1	0	1	1
Dairying 21	V. E. Scott	Cheese Making	3	3	0	1
23	V. E. Scott	Butter Making	2	2	0	4

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, FIRST SEMESTER, 1913-1914—Continued

Courses	Instructor	Title of course	Hrs. credit	Hrs. pr. wk. Lec. Lab.	M.*	W.	T.	
Practicums			1	0	1	7	0	7
Drawing 1	K. Lewers	Mechanical	2	0	2	25	0	25
2a	J. G. Scrugham	Elem. Mech. Drawing	2	0	2	1	0	1
3	J. G. Scrugham	Elem. Mach. Design	3	0	3	1	0	1
26	J. G. Scrugham	Steam Boiler Design	3	0	3	2	0	2
27	J. G. Scrugham	Adv. Mach. Design	3	0	3	5	0	5
28	J. G. Scrugham	Adv. Mach. Design	2	0	2	11	0	11
3a	H. P. Boardman	Map Drawing	1	0	1	1	0	1
Economics 1	Romanzo Adams	Economic History	2	2	0	6	7	14
3	Romanzo Adams	Principles of Economics	3	3	0	8	2	10
24	Romanzo Adams	The Tariff	2	2	0	3	1	4
25	Romanzo Adams	Hist. of Economic Thot.	2	2	0	3	1	4
28	Romanzo Adams	Ancient Economic Thot.	2	2	0	1	0	1
Education 1	G. Ordahl	Science of Education	3	3	0	0	17	17
3	G. A. Day	Theory and Prac. Teach.	6	5	12	0	17	17
5	G. Ordahl	Child and Ad. Psych.	2	2	0	0	22	22
7	R. Pollock	Child Literature	2	2	0	0	5	5
8	M. E. Mack	Nature Study	2	1	1	0	12	12
9	R. Pollock	Indust. Geography	2	2	0	0	12	12
23	R. Pollock	History of Education	3	3	0	0	11	11
English 1a	A. E. Turner	Comp. and Rhetoric	3	3	0	24	8	32
1b	A. E. Hill	Comp. and Rhetoric	3	3	0	12	11	23
1c	A. E. Hill	Comp. and Rhetoric	3	3	0	7	25	32
Zero	A. E. Turner	Comp. and Rhetoric	0	3	0	8	0	8
2	A. E. Hill	Comp. and Rhetoric Adv.	3	3	0	9	4	13
3	A. E. Turner	Argumentation	2	2	0	5	0	5
4	H. W. Hill	History English Lit.	3	3	0	0	8	8
5	A. E. Hill	Short Story	2	2	0	0	5	5
26	H. W. Hill	Shakespeare	3	3	0	2	10	12
27	H. W. Hill	Chaucer	3	3	0	1	15	16
31	H. W. Hill	Modern Drama	2	2	0	0	8	8
40	H. W. Hill	Seminar	2	2	0	1	4	5
English 6	A. E. Turner	Public Speaking	2	2	0	5	0	5
Elec. Eng. 1	G. D. Powers	Elem. Electricity	2	2	0	12	3	15
21	J. G. Scrugham	Direct Currents	3	3	0	11	0	11
22a	G. D. Powers	Transmission Lines	2	2	0	4	0	4
25	G. D. Powers	Elect. Laboratory	3	0	3	13	0	13
26	G. D. Powers	Elect. Laboratory	3	0	3	4	0	4
27a	J. G. Scrugham	Electric Power Plants	4	4	0	2	0	2
29	J. G. Scrugham	Adv. Elect. Eng.	2	0	2	25	0	25
French 1	L. de Laguna	Beginning French	3	3	0	10	18	28
2	L. de Laguna	Translation	3	3	0	3	14	17
23	L. de Laguna	Classical French	2	2	0	1	7	8
26	L. de Laguna	Modern Dramatists	3	3	0	2	13	15
27	L. de Laguna	Gen'l Survey French Lit.	1	1	0	1	9	10
40	L. de Laguna	Thesis	1	1	0	1	0	1
Geology 21a	J. C. Jones	General Geology	3	3	0	12	0	12
25	J. C. Jones	Economic	3	3	0	2	0	2
26a	J. C. Jones	Physiography	2	2	0	1	3	4
German 1	K. Riegelhuth	Elementary German	3	3	0	9	8	17
2	K. Riegelhuth	Narrative Prose	3	3	0	1	20	21
3	K. Riegelhuth	Introduction to Classics	3	3	0	0	9	9
10	K. Riegelhuth	Scientific German	2	2	0	3	0	3
25	K. Riegelhuth	Poetry	3	3	0	2	8	5
Greek 1	J. C. Watson	Elementary Greek	6	6	0	3	0	3
3	J. C. Watson	Plato and Lysias	2	2	0	1	3	4
27	J. C. Watson	Herodotus	2	2	0	0	1	1
31	R. C. Thompson	Thucydides	3	3	0	1	1	2
History 1	S. C. Feemster	Medieval	3	0	0	8	17	25
2	J. E. Wier	Modern	2	2	0	1	10	11
3	J. E. Wier	Woman in History	1	1	0	0	14	14
4	S. C. Feemster	American History	3	3	0	2	4	6
25	S. C. Feemster	Const. & Pol. Hist. of U.S.	3	3	0	2	1	3
26	J. E. Wier	Westward Expansion	2	2	0	8	31	34
30	J. E. Wier	Pacific Slope	2	2	0	0	5	5
31	S. C. Feemster	Prin. and Prac. of Politics	2	2	0	1	4	5
32	J. E. Wier	Colonial Government	1	1	0	2	3	5
33	J. E. Wier	Research	1	1	0	0	5	5
Thesis	J. E. Wier		1	1	0	0	2	2
Home Economics 1a	K. Bardenwerper	Textiles	1	1	1	0	40	40
2a	K. Bardenwerper	Food Values	1	1	1	0	20	20
3a	K. Bardenwerper	History of Cookery	1	1	1	0	15	15
4a	K. Bardenwerper	Sanitation	1	2	0	0	9	9
5a	K. Bardenwerper	Lecture Course	1	1	0	0	9	9
2b	K. Bardenwerper	Camp Cooking	1	1	1	8	0	8
5b	K. Bardenwerper	Lecture on Food	1	1	0	5	0	5
Latin 4	J. C. Watson	Plautus & Terence	3	3	0	1	4	5
6	J. C. Watson	Prose Composition	1	1	0	1	0	1
D	R. C. Thompson	Vergil	3	3	0	2	1	3
1	R. C. Thompson	de Senectute	3	3	0	2	8	10
3	R. C. Thompson	Prose Composition	1	1	0	2	9	11

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, FIRST SEMESTER, 1913-1914—Continued

Courses	Instructor	Title of course	Hrs. credit	Hrs. pr. wk. Lec.	Hrs. pr. wk. Lab.	M.*	W.	T.
Latin 7	R. C. Thompson	Roman Private Life	2	2	0	0	6	6
24	R. C. Thompson	Petroneus	2	2	0	0	3	3
28	R. C. Thompson	Teachers' Course	2	2	0	0	3	3
25	J. E. Church	Art Masterpieces	1½	1½	0	0	6	6
60	J. E. Church	Graduate Thesis	1	3	0	0	2	2
Law 21	Robert Lewers	Elementary Law	3	3	0	10	2	12
23	Robert Lewers	Constitutional Law	3	3	0	2	1	3
Mathematics a	C. Haseman	Elementary Algebra	1	1	0	6	0	6
1	C. Haseman	Advanced Algebra	3	3	0	22	0	22
7	C. Haseman	Analytical Geometry	3	3	0	30	0	30
8	C. Haseman	Differential Calculus	5	5	0	15	2	17
20	C. Haseman	Mechanics	3	3	0	11	0	11
21	C. Haseman	Strength Materials	2	2	0	8	0	8
23	C. Haseman	Solid Analytical Geom.	2	2	0	1	3	4
30	C. Haseman	Differential Equations	3	3	0	2	3	5
Mech. Eng. 1	J. G. Scruggam	Power and Power Trans.	2	2	0	30	0	30
23	J. G. Scruggam	Machine Design Text.	1	1	0	9	0	9
25	G. D. Powers	Steam Engines	4	4	0	6	0	6
26	G. D. Powers	Gas Engines	2	2	0	12	0	12
29	A. W. Preston	Shop Management	2	0	2	5	0	5
30	G. D. Powers	Mechanical Laboratory	2	0	2	9	0	9
Mechanic Arts 1	A. W. Preston	Wood Shop	2	0	2	25	0	25
2	A. W. Preston	Forge Shop	2	0	2	20	0	20
3	A. W. Preston	Machine Shop	2	0	2	25	0	25
4	A. W. Preston	Foundry	2	0	2	17	0	17
Meteorology 1	S. P. Ferguson	Meteorology	1	1	0	2	0	2
Military 1	H. LaF. Applewhite	Military Science, Tactics	1	4	--	42	--	42
2	H. LaF. Applewhite	Military Science, Tactics	1	4	--	42	--	42
3	H. LaF. Applewhite	Military Science, Tactics	1	4	--	24	--	24
Mineralogy 1a	J. C. Jones	Deter. Mineralogy	2	0	2	14	0	14
1c	J. C. Jones	Elementary Mineralogy	1	1	0	8	0	8
24	J. C. Jones	Optical Properties	2	2	0	8	0	8
25	J. C. Jones	Optical Properties, Lab.	1	0	1	3	0	3
Mining 21	D. B. Huntley	Methods of Timbering	4	4	0	4	0	4
23a	D. B. Huntley	Machine Design	2	0	2	1	0	1
27	W. S. Palmer	General Metallurgy	2	2	0	7	0	7
28	D. B. Huntley	Mtgly. Gold and Silver	4	4	0	4	0	4
30	W. S. Palmer	Metallurgy	2	0	2	5	0	5
31a	W. S. Palmer	Assaying, Lectures	1	1	0	5	0	5
32	W. S. Palmer	Assaying, Laboratory	1	0	1	5	0	5
36	D. B. Huntley	Conference	2	2	0	4	0	4
Music 1	M. Denny	Teachers' Course	1	2	0	0	31	31
2	M. Denny	Teachers' Course	1	2	0	0	14	14
Physics 1	L. W. Hartman	Mechanics and Heat	4	2	2	13	0	13
2	L. W. Hartman	Mechanics and Heat	5	5	0	23	0	23
3	L. W. Hartman	Mechanics and Heat	2	0	2	18	0	18
21	L. W. Hartman	Elect. Measurements	1	0	1	2	0	2
23	L. W. Hartman	Light and Phys. Optics	2	2	0	1	0	1
24	L. W. Hartman	Physical Optics	1	0	1	1	0	1
25	L. W. Hartman	History of Physics	1	1	0	2	0	2
Psychology 1	G. Ordahl	General Psychology	3	3	0	1	4	5
21	G. Ordahl	Social Psychology	2	2	0	1	4	5
Physical Education 1	Elsie Sameth	Physical Training	1	3	--	--	36	36
2	Elsie Sameth	Physical Training	1	3	--	--	12	12
Spanish 21	L. deLaguna	Beginning Spanish	2	2	0	6	11	17
22	L. deLaguna	Translation	2	2	0	3	4	7
23	L. deLaguna	Classical Prose	1	1	0	0	3	3

LIST OF COURSES GIVEN DURING SECOND SEMESTER 1913-1914

Courses	Instructor	Title of course	Hrs. credit	Hrs. pr. wk. Lec.	Hrs. pr. wk. Lab.	M.*	W.	T.
Accounting 21	R. Lewers	Municipal Accounting	1	0	1	2	0	2
22	R. Lewers	Cost Accounting	1	0	1	7	0	7
Agronomy 6	H. E. Murdock	Farm Mechanics	4	3	1	7	0	7
23	C. S. Knight	Farm Crops	4	2	2	8	0	8
28	H. E. Murdock	Irrigation	5	5	0	5	0	5
Animal Husbandry 1	V. E. Scott	Breeds of Livestock	5	4	1	10	0	10
22	V. E. Scott	Breeding	4	2	2	14	0	14
23	V. E. Scott	Feeds and Feeding	4	2	2	11	0	11
25	V. E. Scott	Livestock Registration	2	1	1	13	0	13
Art 1	Miss Lewers	Drawing and Painting	1	0	1	4	25	29
5a	Miss Lewers	Teachers' Course	1	0	2	0	21	21
5b	Miss Lewers	Teachers' Course	1	0	2	0	22	22
Biology—Botany 1	P. Frandsen	General Botany	4	2	2	10	13	23
23	P. Frandsen	Plant Histology	3	1	2	1	0	1
40	P. Frandsen	Taxonomy	2	0	2	1	0	1
Hygiene 1	P. Frandsen	Human Anatomy	4	2	2	5	19	24
Zoology 10	P. Frandsen	Economic Zoology	3	3	0	7	0	7
24	P. Frandsen	Embryology	4	2	2	3	1	4
Chemistry 1	S. E. Ross	General Chemistry	2	2	0	14	2	16
2	S. E. Ross	Gen. Chemistry, Lab.	2	0	2	14	2	16
3	E. E. Williams	Inorganic Chemistry	2	2	0	34	1	35

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, SECOND SEMESTER, 1913-1914—Continued

Courses	Instructor	Title of course	Hrs. credit	Hrs. pr. wk.	M.*	W.	T.
Chemistry 4	E. E. Williams	Inorganic Chem., Lab.	2	0	2	26	1
5	E. E. Williams	Quantitative Analysis	3	0	3	2	0
6	E. E. Williams	Volumetric Analysis	3	1	2	7	0
23	E. E. Williams	Technical Analysis	2	0	2	1	0
27	C. A. Jacobson	Organic	2	2	0	3	0
28	C. A. Jacobson	Organic, Laboratory	2	0	2	3	0
29	S. E. Ross	Agricultural	2	2	0	6	0
30	S. E. Ross	Agricultural, Lab.	2	0	2	6	0
44	C. A. Jacobson	Physical Chemistry	2	2	0	3	2
45	C. A. Jacobson	Physical Chem., Lab.	2	0	2	2	2
Civil Engineering 21	H. P. Boardman	Plane Surveying	4	2	2	23	0
22	H. P. Boardman	Highway Engineering	1	1	0	2	0
23-24	H. P. Boardman	Structural Analysis	5	3	2	1	0
26	H. P. Boardman	Sewerage	3	3	0	4	0
27	H. P. Boardman	Masonry Construction	3	2	1	6	0
27a	H. P. Boardman	Masonry Construction	1	0	1	1	0
29	H. P. Boardman	Graphics	2	0	2	2	0
29a	H. P. Boardman	Advanced Graphics	3	3	0	2	1
34	H. P. Boardman	Water Power Eng.	3	3	0	7	0
Dairying 23	V. E. Scott	Butter-making	2	1	1	2	0
Dairying Thesis	V. E. Scott		4	0	4	1	0
Drawing 1	Miss Lewers	Freehand	2	0	2	6	1
3	A. W. Preston	Mechanical	3	0	3	27	0
3a	H. P. Boardman	Map Drawing	1	0	1	6	0
4	G. D. Powers	Descriptive Geometry	3	1	2	21	0
26	J. G. Scrugham	Steam Boiler Design	1	0	1	8	0
28	J. G. Scrugham	Adv. Mach. Design	3	0	3	2	0
Economics 2	R. Adams	Economic Geography	2	2	0	7	6
3	R. Adams	Prins. of Economics	3	3	0	8	2
23	R. Adams	State in relation to Ind.	2	2	0	4	1
40	R. Adams	Research	2	2	0	1	0
Education 1	G. Ordahl	Science of Education	4	3	1	0	16
8	Miss Day	Theory and Prac. Teach.	5	5	12	0	16
7	G. Ordahl	Child Literature	1	1	0	0	5
8	Miss Mack	Nature Study	2	1	1	0	11
9	Miss Pollock	Industrial Geography	2	2	0	0	12
23	Miss Pollock	History of Education	3	3	0	0	9
Elect. Engineering 1	J. G. Scrugham	Elect. Engineering	2	2	0	26	0
22	J. G. Scrugham	Alternating Currents	3	3	0	10	0
24	J. G. Scrugham	Electric Railways	3	3	0	7	0
25	J. G. Scrugham	Electric Laboratory	2	0	2	12	0
26	J. G. Scrugham	Electric Laboratory	2	0	2	5	0
English Zero	A. E. Turner	Comp. and Rhetoric	0	3	0	9	1
1a	A. E. Turner	Comp. and Rhetoric	3	3	0	30	10
1b	A. E. Hill	Comp. and Rhetoric	3	3	0	8	14
1c	A. E. Hill	Comp. and Rhetoric	3	3	0	11	23
2	A. E. Hill	Adv. Composition	3	3	0	7	3
3	A. E. Turner	Argumentation	3	3	0	8	0
4	H. W. Hill	History of English Lit.	3	3	0	0	5
5	A. E. Hill	The Short Story	2	2	0	0	4
6	A. E. Turner	Public Speaking	3	3	0	18	3
7	A. E. Turner	Expression	1	2	0	0	11
26	H. W. Hill	Shakespeare	3	3	0	2	9
27	H. W. Hill	Chaucer	1½	1½	0	0	5
28	H. W. Hill	Milton	3	3	0	1	12
31	A. E. Hill	Modern Drama	2	2	0	1	6
40	H. W. Hill	Seminar	2	2	0	1	4
French 1	Miss deLaguna	Beginning French	3	3	0	7	9
2	Miss deLaguna	Translation	3	3	0	2	12
23	Miss deLaguna	Classical French	2	2	0	1	6
27	Miss deLaguna	Modern Drama	2	2	0	2	11
28	Miss deLaguna	Survey of French Lit.	1	1	0	1	7
29	Miss deLaguna	Advanced French	1	1	0	1	1
40	Miss deLaguna	Old French	1	1	0	1	0
Thesis	Miss deLaguna		1				1
Geology 1c	J. C. Jones	Elementary	2	2	0	10	0
21	J. C. Jones	General Geology	2	2	0	8	1
22	J. C. Jones	Elementary Petrology	2	2	0	1	0
23a	J. C. Jones	Petrography	1	1	0	2	0
23b	J. C. Jones	Petrography Lab.	1	0	1	1	0
24a	J. C. Jones	Field Geology	1	0	1	5	0
26	J. C. Jones	Physiography	2	2	0	2	3
German 1	Miss Riegelhuth	Elementary German	3	3	0	7	6
2	Miss Riegelhuth	Narrative Prose	3	3	0	0	17
3	Miss Riegelhuth	Introduction to Classics	3	3	0	0	8
10	Miss Riegelhuth	Scientific German	2	2	0	3	0
25	Miss Riegelhuth	History German Lit.	3	3	0	1	3
Greek 2	J. C. Watson	Anabasis	5	5	0	2	0
4	J. C. Watson	Homer	3	3	0	1	3
27	R. C. Thompson	Euripides & Sophocles	3	3	0	1	2
28	J. C. Watson	Odyssey	2	2	0	0	1
History 1	S. C. Feemster	Medieval	3	3	0	6	15
2	S. C. Feemster	Modern	2	2	0	0	9
3	Miss Wier	Woman in History	1	1	0	0	15

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, SECOND SEMESTER, 1913-1914—Continued

<i>Course</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. Lec.</i>	<i>wh. Lab.</i>	<i>M.*</i>	<i>W.</i>	<i>T.</i>
History 4	S. C. Feemster	American History	3	3	0	1	3	4
25	S. C. Feemster	Const. & Pol. Hist. U. S.	3	3	0	3	1	4
26	Miss Wier	Westward Exp.	2	2	0	5	23	28
30	Miss Wier	Pacific Slope	2	2	0	2	5	7
32	Miss Wier	Colonial Government	2	2	0	0	4	4
33	Miss Wier	Research	3½	3½	0	2	3	5
40	Miss Wier	Thesis	3½	3½	0	0	2	2
81	S. C. Feemster	Prins. & Prac. Politics	2	2	0	1	3	4
Home Economics 1a	K. Bardenwerper	Textiles	1	1	1	0	85	35
2a	K. Bardenwerper	Food Values	1	1	1	0	82	32
3a	K. Bardenwerper	History Cookery	1	2	0	0	5	5
4a	K. Bardenwerper	Sanitation	1	2	0	0	9	9
5a	K. Bardenwerper	Lecture Course	1	2	0	0	15	15
3b	K. Bardenwerper	History of Cookery	1	2	0	2	0	2
4b	K. Bardenwerper	Diet in health and dis.	1	2	0	1	0	1
5b	K. Bardenwerper	Lecture Course	1	2	0	6	1	7
6b	K. Bardenwerper	Camp Cooking	1	1	1	4	0	4
7b	K. Bardenwerper	Lecture	1	1	0	0	1	1
Latin D	R. C. Thompson	Vergil	4	4	0	1	1	2
2	R. C. Thompson	Horace and Catullus	3	3	0	2	7	9
3	R. C. Thompson	Prose Composition	1	1	0	2	7	0
5	J. C. Watson	Vergil	3	3	0	1	3	4
6	J. C. Watson	Prose Composition	1	1	0	1	0	1
8	R. C. Thompson	Roman Public Life	2	2	0	0	9	9
9	R. C. Thompson	Sight Reading	1	1	0	1	6	7
25a and 45a	J. E. Church	Art Masterpieces	1½	1½	0	0	6	6
26	R. C. Thompson	Euripides and Sophocles	3	3	0	1	1	2
60	J. E. Church	Seminar	3	3	0	0	2	2
Law 11	R. Lewers	Elementary Law	3	3	0	14	0	14
22	R. Lewers	International Law	3	3	0	8	3	11
Mathematics 2	C. Haseman	Solid Geometry	2	2	0	13	0	13
3	C. Haseman	Plane Trigonometry	3	3	0	29	0	29
7	C. Haseman	Analytical Geometry	3	3	2	22	0	22
9	C. Haseman	Integral Calculus	3	3	0	15	1	16
20	C. Haseman	Mechanics	3	3	0	7	0	7
21	C. Haseman	Strength Materials	2	2	0	1	0	1
30	C. Haseman	Differential Equations	3	3	0	1	3	4
22	C. Haseman	Engineering Math.	2	2	0	2	0	2
35	C. Haseman	Advanced Calculus	3	3	0	1	3	4
40	C. Haseman	Theory of Functions	2	2	0	1	0	1
26	C. Haseman	Theory of Numbers	2	2	0	0	1	1
Mechanical Eng. 2	G. D. Powers	Kinematics	2	1	1	18	0	18
28	G. D. Powers	Valve Gears	2	1	1	5	0	5
30	G. D. Powers	Laboratory Practice	2	0	2	8	0	8
24	J. G. Scrugham	Steam Boilers	1	1	0	10	0	10
27a	J. G. Scrugham	Indust. Organization	2	2	0	16	0	16
29	A. W. Preston	Shop Management	1	0	1	7	0	7
Mechanic Arts 1	A. W. Preston	Wood Shop	1	0	1	8	0	8
2	A. W. Preston	Forge Shop	2	0	2	13	0	13
3	A. W. Preston	Machine Shop	2	0	2	32	0	32
4	A. W. Preston	Foundry	2	0	2	9	0	9
Military 1	H. LaF. Applewhite	Military Science, Tactics	1	4	--	38	--	38
2	H. LaF. Applewhite	Military Science, Tactics	1	4	--	31	--	31
3	H. LaF. Applewhite	Military Science, Tactics	1	4	--	23	--	23
4	H. LaF. Applewhite	Military Science, Tactics	1	4	--	10	--	10
5	H. LaF. Applewhite	Military Science, Tactics	1	4	--	8	--	8
Minerology 1b	J. C. Jones	Blowpipe Analysis	2	0	2	12	0	12
3	J. C. Jones	Descriptive Mineral	2	2	0	10	0	10
Mining 22	D. B. Huntley	General Mining	4	4	0	2	0	2
23b	D. B. Huntley	Mining Laboratory	2	0	2	2	0	2
26	D. B. Huntley	Contracts and Spec.	1	1	0	2	0	2
27	W. S. Palmer	General Metallurgy	2	2	0	6	0	6
29	D. B. Huntley	Copper, Zinc, etc.	4	4	0	3	0	3
30	W. S. Palmer	Metallurgy Laboratory	2	0	2	3	0	3
31b	W. S. Palmer	Assaying Lecturing	1	1	0	4	0	4
32	W. S. Palmer	Assaying Laboratory	2	0	2	4	0	4
36	D. B. Huntley	Conference	2	2	0	2	0	2
40	D. B. Huntley	Thesis	1	0	3	1	0	1
Music 1	Miss Denny	Teachers' Course	1	2	0	0	37	37
8	Miss Denny	Musical History	1	2	0	0	19	19
Physical Ed. 1	Elsie Sameth	Physical Education	1	3	--	--	12	12
2	Elsie Sameth	Physical Education	1	2	--	--	35	35
3	Elsie Sameth	Physical Education	1	2	--	--	20	20
Physics 1	L. W. Hartman	General Physics	4	3	1	11	0	11
2	L. W. Hartman	General Physics	5	5	0	17	0	17
3	L. W. Hartman	Physic. Measurements	2	0	2	16	0	16
25	L. W. Hartman	Elect. Measurements	1	1	0	1	0	1
Psychology 3	George Ordahl	Experimental	4	3	1	0	11	11
5	George Ordahl	Child and Adolescent	2	2	0	0	21	21
22	George Ordahl	Social	2	2	0	0	2	2
Spanish 21	Miss deLaguna	Beginning Spanish	2	2	0	2	6	8
22	Miss deLaguna	Read. and Convers.	2	2	0	2	4	6
23	Miss deLaguna	Classical Spanish	1	1	0	0	3	3

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES GIVEN DURING FIRST SEMESTER 1914-1915

<i>Course</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. wk. Lec. Lab.</i>	<i>M.*</i>	<i>W.</i>	<i>T.</i>	
Accounting 22.....	R. Lewers.....	Cost Accounting.....	1	0	1	7	0	7
Agronomy 1.....	J. B. Frisbee.....	Elemt. Agriculture.....	3	3	0	19	0	19
4.....	J. B. Frisbee.....	Farm Crops.....	3	3	0	10	0	10
27.....	J. B. Frisbee.....	Farm Management.....	5	3	2	3	0	3
Animal Husbandry 4.....	F. W. Wilson.....	Stock Judging.....	4	2	2	5	0	5
	22 F. W. Wilson.....	Stock Breeding.....	2	2	0	5	0	5
	23 F. W. Wilson.....	Adv. Stock Judging.....	2	0	2	3	0	3
	27 F. W. Wilson.....	Adv. Stock Judging.....	2	0	2	3	0	3
Art 1.....	Kate Lewers.....	Drawing and Painting.....	1	0	1	0	35	35
5a.....	Kate Lewers.....	Teachers' Course.....	1	0	1	0	35	35
5b.....	Kate Lewers.....	Teachers' Course.....	1	0	1	0	18	18
Biology-Botany 26.....	P. A. Lehenbauer.....	Indust. Botany.....	3	2	1	5	0	5
Botany 40.....	P. A. Lehenbauer.....	Research.....	2	-	-	1	0	1
Hygiene.....	P. Frandsen.....	Human Anatomy.....	3	2	1	2	22	24
Zoology 1.....	P. Frandsen.....	General Zoology.....	4	2	2	20	4	24
6.....	P. Frandsen.....	Economic Zoology.....	5	3	2	2	2	4
Chemistry 1.....	M. Adams.....	General Chemistry.....	2	2	0	31	5	36
2.....	E. E. Williams.....	General Chem. Lab.....	2	0	2	32	5	37
3.....	M. Adams.....	Inorganic Chem.....	2	2	0	57	1	58
4.....	E. E. Williams.....	Inorganic Chem. Lab.....	2	0	2	61	2	63
5.....	M. Adams.....	Quant. Analysis.....	3	1	2	7	0	7
5a.....	M. Adams.....	Fuel Analysis.....	1	0	1	3	0	3
24.....	M. Adams.....	Indust. Chemistry.....	2	2	0	7	1	8
25.....	M. Adams.....	Tech. Analysis.....	2	0	2	3	0	3
27.....	E. E. Williams.....	Organic Chemistry.....	2	2	0	3	0	3
28.....	E. E. Williams.....	Organic Chem. Lab.....	2	0	2	3	0	3
29.....	C. A. Jacobson.....	Agricultural Chemistry.....	3	3	0	3	0	3
40.....	M. Adams.....	Seminar.....	2	2	0	2	0	2
46.....	M. Adams.....	History of Chemistry.....	2	2	0	2	0	2
60.....	M. Adams.....	Graduate Seminar.....	3	0	3	2	0	2
Civil Engineering 21.....	H. P. Boardman.....	Plane Surveying.....	4	2	2	17	0	17
23.....	H. P. Boardman.....	Structural Analysis.....	2	2	0	1	0	1
24.....	H. P. Boardman.....	Structural Design.....	4	4	0	2	0	2
25.....	H. P. Boardman.....	Railroad Engineering.....	3	3	0	3	0	3
27a.....	H. P. Boardman.....	Masonry Con.....	1	1	0	1	0	1
29a.....	H. P. Boardman.....	Graphics.....	2	0	2	2	0	2
29.....	H. P. Boardman.....	Graphics Statics.....	2	0	2	16	0	16
28.....	H. P. Boardman.....	Hydraulics.....	2	2	0	11	0	11
33.....	H. P. Boardman.....	Reinforced Concrete.....	5	5	0	3	0	3
34.....	H. P. Boardman.....	Water Power Eng.....	1	1	0	1	0	1
36.....	H. P. Boardman.....	Eng. Literature.....	1	1	0	5	0	5
Dairying 22.....	V. E. Scott.....	Butter Making.....	5	2	3	5	0	5
23.....	V. E. Scott.....	Cheese Making.....	2	1	1	3	0	3
Drawing 1.....	Miss Lewers.....	Freehand.....	2	0	2	31	2	33
2.....	Miss Lewers.....	Mechanical.....	1	0	1	30	1	31
25.....	J. G. Scrugham.....	Adv. Machine Design.....	2	0	2	7	0	7
27.....	J. G. Scrugham.....	Adv. Machine Design.....	2	0	2	7	0	7
28.....	J. G. Scrugham.....	Electrical Design.....	3	0	3	4	0	4
Economics 3.....	R. Adams.....	Principles of Economics.....	3	3	0	6	6	12
4.....	R. Adams.....	Rural Economics.....	3	3	0	5	0	5
21.....	R. Adams.....	Public Finance.....	3	3	0	8	0	8
Education 1.....	Miss Pollock.....	Science of Education.....	3	3	0	0	14	14
3.....	Miss Day.....	Theory & Prac. Tchng.....	5	5	17	0	25	25
5.....	Miss Pollock.....	Child and Adolescence.....	2	2	0	0	17	17
8.....	Miss Mack.....	Nature Study.....	2	1	1	0	3	3
9.....	Miss Pollock.....	Ind. Geography.....	2	2	0	0	5	5
23.....	Miss Pollock.....	History of Education.....	3	3	0	0	3	3
Electrical Eng. 21.....	J. G. Scrugham.....	Electrical Engineering.....	3	3	0	13	0	13
23.....	G. D. Powers.....	Electrical Transmission.....	2	2	0	19	0	19
25.....	G. D. Powers.....	Direct Current Lab.....	1	0	1	4	0	4
26.....	G. D. Powers.....	Electrical Eng. Lab.....	2	0	2	3	0	3
27.....	J. G. Scrugham.....	Element. Power Plants.....	2	0	2	5	0	5
English 0.....	A. E. Turner.....	Composition & Rhetoric.....	0	3	0	15	1	16
1a.....	A. E. Turner.....	Composition & Rhetoric.....	3	3	0	31	11	42
1b.....	A. E. Hill.....	Composition & Rhetoric.....	3	3	0	26	11	37
1c.....	A. E. Hill.....	Composition & Rhetoric.....	3	3	0	18	20	38
2a.....	A. E. Hill.....	Advanced Composition.....	3	3	0	11	4	15
3.....	A. E. Turner.....	Argumentation.....	2	2	0	13	1	14
4.....	H. W. Hill.....	History English Lit.....	3	3	0	0	20	20
6.....	A. E. Turner.....	Public Speaking.....	2	2	0	17	7	24
7.....	A. E. Turner.....	Expression.....	1	2	0	2	23	25
8.....	A. E. Turner.....	Adv. Public Speaking.....	1	1	0	1	1	2
25.....	H. W. Hill.....	XIX Century.....	3	3	0	1	14	15
26.....	H. W. Hill.....	Old English.....	3	3	0	0	5	5
32.....	A. E. Hill.....	The Novel.....	2	2	0	0	7	7
33.....	H. W. Hill.....	Early Middle English.....	2	2	0	0	6	6
40.....	H. W. Hill.....	Seminar.....	1	1	0	0	5	5
9.....	A. E. Turner.....	Advanced Expression.....	1	1	0	0	2	2
French 1.....	Miss deLaguna.....	Beginning French.....	3	3	0	2	22	24
2.....	Miss deLaguna.....	Translation.....	3	3	0	4	12	16
21.....	Miss deLaguna.....	History French Novel.....	2	2	0	2	9	11
22.....	Miss deLaguna.....	French Literature.....	2	2	0	0	10	10
30.....	Miss deLaguna.....	Advanced Conversation.....	1	1	0	1	12	13

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, FIRST SEMESTER, 1914-1915—Continued

<i>Courses</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. Lec.</i>	<i>Lab.</i>	<i>M.*</i>	<i>W.</i>	<i>T.</i>
Geology 21	J. C. Jones	General Geology	3	3	0	28	0	28
25	J. C. Jones	Economic Geology	3	3	0	7	0	7
27	J. C. Jones	Physiography	2	2	0	0	5	5
German 1	Miss Riegelhuth	Elementary German	3	3	0	6	6	12
2	Miss Riegelhuth	Narrative Prose	3	3	0	0	15	15
10	Miss Riegelhuth	Scientific German	2	2	0	4	0	12
3	Miss Riegelhuth	Introduction to Classics	3	3	0	1	11	12
24	Miss Riegelhuth	XIX Century Drama	3	3	0	2	9	11
Greek 1	J. C. Watson	Elementary Greek	3	3	0	4	1	5
3	J. C. Watson	Plato and Lysias	3	3	0	2	0	2
21	R. C. Thompson	Thucydides	3	3	0	1	2	3
25	J. C. Watson	Plato	3	3	0	0	1	1
29	J. C. Watson	Euripides' Medea	1	1	0	0	2	2
History 1	Miss Wier	Medieval	3	3	0	10	25	35
2	S. C. Feemster	Modern Europe	3	3	0	0	7	7
3	Miss Wier	Woman in History	1	1	0	0	21	21
4	S. C. Feemster	American History	3	3	0	1	8	9
22	S. C. Feemster	The Ancient World	2	2	0	1	5	6
23	S. C. Feemster	Constitution England	2	0	0	4	0	4
28	J. E. Wier	Research Nev. History	1	1	0	1	2	3
29	J. E. Wier	French Revolution	2	2	0	1	11	12
31	S. C. Feemster	Political Science	2	2	0	3	8	11
33	Miss Wier	Research	1	1	0	2	2	4
34	Miss Wier	Econ. and Pol. Problems	2	2	0	4	2	6
40	Miss Wier	Seminar	1	1	0	0	2	2
Home Economics 1	Miss Bardenwerper	Elements of H. E.	1	1	1	0	2	2
10	Miss Bardenwerper	Camp Cookery	1	0	1	3	2	5
12	Miss Bardenwerper	Textiles & Needle Work	1	0	1	0	34	34
13	Miss Bardenwerper	Practice Cookery	1	1	1	1	37	38
14	Miss Bardenwerper	Fancy Cookery	1	1	1	1	17	18
15	Miss Bardenwerper	Household Admin.	1	1	1	0	6	6
Latin 1	R. C. Thompson	de Senectute	3	3	0	5	8	13
3	R. C. Thompson	Prose Composition	1	1	0	5	11	16
4	J. C. Watson	Livy	3	3	0	2	6	8
9	R. C. Thompson	Sight Translation	1	2	0	3	4	7
Latin 29	R. C. Thompson	Roman Satire	3	3	0	0	2	2
21	J. E. Church	Comparative Past. Poetry	2	2	0	0	4	4
22	J. E. Church	Roman Burial Inscrip.	1	1	0	0	2	2
25	J. E. Church	Greek and Roman Art	2	2	0	0	10	10
27	J. E. Church	The Latin Language	1	1	0	0	2	2
60	J. E. Church	Graduate Seminar	1	0	3	0	1	1
Law 21	Robert Lewers	Elementary Law	3	3	0	16	1	17
23	Robert Lewers	International Law	3	3	0	3	0	3
Mathematics 1	C. Haseman	Advanced Algebra	3	3	0	41	22	63
a	C. Haseman	Elementary Algebra	2	2	0	2	1	3
2	C. Haseman	Solid Geometry	2	2	0	13	5	18
7	C. Haseman	Analytic Geometry	3	3	0	36	1	37
8	C. Haseman	Differential Calculus	5	5	0	24	0	24
20	C. Haseman	Mechanics	3	3	0	15	0	15
21	C. Haseman	Strength Material	2	2	0	13	0	13
28	C. Haseman	Theory of Equations	2	2	0	1	0	1
30	C. Haseman	Differential Equations	3	3	0	0	1	1
38	C. Haseman	Higher Geometry	2	2	0	1	2	3
50	C. Haseman	Euclidean Geometry	3	3	0	1	2	3
Mech. Eng. 1	J. G. Scrugham	Power and Power Trans.	2	2	0	37	0	37
25	J. G. Scrugham	Thermodynamics	4	4	0	11	0	11
26	G. D. Powers	Farm Gas Engines	2	2	0	12	0	12
28	G. D. Powers	Valve Gears	1	0	1	2	0	2
30	J. G. Scrugham	Engineering Prac.	1	0	1	11	0	11
31	J. G. Scrugham	Automobile Engineer	1	1	0	21	0	21
23	J. G. Scrugham	Machine Design	2	2	0	5	0	5
29	A. W. Preston	Shop Management	2	0	2	3	0	3
Mech. Arts 1	A. W. Preston	Wood Shop	1	0	3	44	3	47
2	A. W. Preston	Forge Shop	2	0	4	42	0	42
3	A. W. Preston	Machine Shop	2	0	2	18	0	18
4	A. W. Preston	Foundry	1	0	1	10	0	10
Military 1	H. LaF. Applewhite	Military Science, Tactics	1	4	--	11	--	11
2	H. LaF. Applewhite	Military Science, Tactics	1	4	--	24	--	24
3	H. LaF. Applewhite	Military Science, Tactics	1	4	--	29	--	29
4	H. LaF. Applewhite	Military Science, Tactics	1	4	--	61	--	61
5	H. LaF. Applewhite	Military Science, Tactics	1	4	--	29	--	29
Mineralogy 1	J. C. Jones	Determinative	2	0	2	16	0	16
21, 22	J. C. Jones	Optical Properties	2	2	2	4	0	4
Mining 21	F. C. Lincoln	Methods of Timbering	3	3	0	16	0	16
21a	F. C. Lincoln	Mining Law	1	1	0	4	0	4
23a	W. S. Palmer	Mining Laboratory	2	0	2	2	0	2
24	F. C. Lincoln	Metallurgy	3	3	0	3	0	3
30	W. S. Palmer	Metallurgy, Laboratory	2	2	0	4	0	4
31a	W. S. Palmer	Assaying, Lectures	1	1	0	8	0	8
32	W. S. Palmer	Assaying, Laboratory	1	0	1	7	0	7
36	F. C. Lincoln	Conference	1	1	0	3	0	3
41	F. C. Lincoln	Microscopy	2	0	2	1	0	1

*M.—Men. W.—Women. T.—Total.

LIST OF COURSES, FIRST SEMESTER, 1914-1915—*Continued*

<i>Courses</i>	<i>Instructor</i>	<i>Title of course</i>	<i>Hrs. credit</i>	<i>Hrs. pr. wk.</i>	<i>W.</i>	<i>T.</i>
Music 1.....	Miss Denny.....	Teachers' Course.....	1	2	0	0
2.....	Miss Denny.....	Teachers' Course.....	1	2	0	0
3.....	Miss Denny.....	History of Music.....	1	2	0	0
4.....	Miss Denny.....	Harmony.....	1	2	0	0
Phys. Education 1.....	E. Sameth.....	Physical Education.....	1	2	--	--
2.....	E. Sameth.....	Physical Education.....	1	2	--	--
3.....	E. Sameth.....	Physical Education.....	1	2	--	--
4.....	E. Sameth.....	Physical Education.....	1	1	--	--
5.....	E. Sameth.....	Physical Education.....	1	1	--	--
Physics 1.....	L. W. Hartman.....	General Physics.....	4	3	1	19
2.....	L. W. Hartman.....	Mechanics, Heat, etc.....	5	0	0	22
3.....	L. W. Hartman.....	Physical Measurements.....	3	0	3	23
21.....	L. W. Hartman.....	Electric Measurements.....	1	0	1	2
25.....	L. W. Hartman.....	History of Physics.....	1	1	0	1
26.....	L. W. Hartman.....	Discharge of Electricity.....	2	2	0	3
27.....	L. W. Hartman.....	Electric Lighting.....	2	2	0	2
Psychology 1.....	Miss Pollock.....	General Psychology.....	3	3	0	2
Spanish 21.....	Miss deLaguna.....	Beginning Spanish.....	2	2	0	6
22.....	Miss deLaguna.....	Advanced Spanish.....	2	2	0	5

*M.—Men. W.—Women. T.—Total.

EFFICIENT RELATION OF FACULTY AND STUDENTS

It might appear to one unacquainted with the University problem that the University possessed too large a faculty for the work it is doing. An observance of the conditions existing in other institutions, which are considered efficient, will demonstrate that the relation between faculty and students in this institution is one of which we should be proud.

The Carnegie Foundation for the Advancement of Teaching, when deciding upon the eligibility of an institution for the privileges of the Foundation, places a good deal of stress upon the question of the relation between students and faculty in number.

In order that I might make clear to you the position of the University of Nevada in relation to other institutions of the country in this regard, I submit herewith a tabular statement, which is taken from an issue of the magazine "Science," published some time ago. I may say that at the present time the University of Nevada has 379 students registered for the year 1914-15, and has an instructional department of 41 instructors, making the ratio 1:9.2:

<i>Name of Institution</i>	<i>No. of Students to a Teacher</i>
Alabama Polytechnic Institute.....	11.6
University of Alabama.....	11.3
University of Arizona.....	4.7
University of Arkansas.....	9
University of California.....	10.4
University of Colorado.....	7.8
State Agricultural College (Colorado).....	3
Colorado School of Mines.....	18.7
Connecticut Agriculture College.....	8
Delaware College.....	6
University of Florida.....	7
Florida State College for Women.....	10.9
University of Georgia.....	11
Georgia School of Technology.....	12.3
North Georgia Agricultural College.....	14.2
University of Idaho.....	9.8
University of Illinois.....	8.4
Indiana University.....	13
Purdue University (Indiana).....	11.2
Iowa State College of Agriculture and Mechanic Arts.....	12.4
State University of Iowa.....	13
University of Kansas.....	11.2
Kansas State Agricultural College.....	12.1
State University (Kentucky).....	9.7

EFFICIENT RELATION OF FACULTY AND STUDENTS—*Continued*

<i>Name of Institution</i>	<i>No. of Students to a Teacher</i>
Louisiana State College and Agricultural and Mechanical College.....	10.4
University of Maine.....	9.2
Maryland Agricultural College.....	7.7
Massachusetts Agricultural College.....	8.5
Massachusetts Institute of Technology.....	6.6
University of Michigan.....	15
Michigan State Agricultural College.....	11.6
Michigan College of Mines.....	8.8
University of Minnesota.....	26.1
Mississippi Agricultural and Mechanical College.....	16.6
University of Mississippi (from 1912 report).....	12.6
University of Missouri.....	8.4
Montana College of Agriculture and Mechanic Arts.....	8.3
Montana School of Mines.....	6.7
University of Montana.....	6.4
University of Nebraska.....	11.3
New Hampshire College of Agriculture and Mechanic Arts.....	6.8
Rutgers College (New Jersey).....	9.3
New Mexico College of Agriculture and Mechanic Arts.....	8.2
University of New Mexico.....	8.1
New Mexico School of Mines.....	6.5
Cornell University (New York).....	6.6
University of North Carolina.....	8.2
North Carolina College of Agriculture and Mechanic Arts.....	10.4
North Dakota Agricultural College.....	11.5
State University and School of Mines (South Dakota).....	9.2
Ohio University.....	19
Miami University (Ohio).....	10
Ohio State University.....	12.8
University of Oklahoma.....	10.9
Oklahoma Agricultural and Mechanical College.....	11.8
Oregon State Agricultural College.....	11.9
University of Oregon.....	8.6
Pennsylvania State College.....	9.5
Rhode Island State College.....	6.6
South Carolina Military Academy.....	17.9
Clemson Agricultural College (South Carolina).....	13.5
University of South Carolina.....	10.5
South Dakota Agricultural College.....	8.6
South Dakota State School of Mines.....	3
University of South Dakota.....	9.6
University of Tennessee.....	6.5
University of Texas.....	18
Agricultural and Mechanical College of Texas.....	16.1
Agricultural College of Utah.....	12.1
University of Vermont and Agricultural College.....	5.5
University of Virginia.....	10.5
Virginia Military Institute.....	16.3
College of William and Mary (Virginia).....	12
State College of Washington.....	13.9
West Virginia University.....	6.5
University of Wisconsin.....	7.9
University of Wyoming.....	5.6
University of Nevada (February 1, 1915).....	9.2

CLASSIFICATION OF THE FACULTY

The number of students registered at the University during this present school year up to the present time is 397; short-course students, 25; a total of 404 on February 1, 1915.

In order to understand the requirements of faculty and assistants in

the University you must understand that the University is divided into three divisions, and that they interlap somewhat. These divisions are instruction, research, and extension. Under the head of instruction we include only those teachers who are given class room work; under research, those employees who are giving their entire time to research; under extension, those employees who are giving their entire time to the taking of the information of the University to the people off the campus. As this institution is unable to use its faculty exclusively for one or the other of these various functions, it happens that a man may be doing research work, teaching, and extension work. In order, therefore, to determine how many people are in the instruction department, and how many in the research department, and how many in the extension department, the following table of classification of faculty is submitted, according to time spent in each division:

	<i>Instruction</i>		<i>Research</i>		<i>Extension</i>		<i>Public Service</i>	
	<i>1913-14</i>	<i>1914-15</i>	<i>1913-14</i>	<i>1914-15</i>	<i>1913-14</i>	<i>1914-15</i>	<i>1913-14</i>	<i>1914-15</i>
Professors	22	21	6	5	..	4	4	4
Associate Professors	3	3	..	..	..	..	1	1
Assistant Professors	6	7	1	1/4	..	..	1 1/2	1 1/2
Instructors	8	8	1 1/4	1 1/2	..	1 1/2	1/2	1/2
Assistants	1 1/4	2 1/2	1 1/4	3 1/2	..	2	..	3/4
Totals	39 1/4	41 1/4	10	9 1/4	0	2 1/2	3 1/4	3 3/4

In making up this list we have estimated the number of instructors who would be engaged at full time in the performance of these duties. That is, if we were able to assign our faculty to duties either in instruction, extension, research, etc., exclusively, we should need for instruction purposes 41 instructors; for experimentation, 9; for extension, 3 and for public service, 3.

STUDENTS

The student statistics of the University are submitted hereunder as follows:

ENROLLMENT BY SCHOOLS AND COLLEGES

	<i>Arts and Science</i>	<i>Engineering</i>	<i>Agriculture</i>	<i>Mining</i>	<i>Education</i>	<i>Total</i>
1902-03	86	31	2	70	26	215
1903-04	61	24	2	45	11	143
1904-05	68	37	2	49	13	169
1905-06	67	37	1	53	11	169
1906-07	70	68	5	73	23	239
1907-08	71	38	2	61	19	191
1908-09	79	36	7	48	31	201
1909-10	98	45	15	44	18	220
1910-11	89	35	25	45	18	212
1911-12	139	50	31	32	23	275
1912-13	146	64	35	29	20	294
1913-14	140	71	21	28	24	292
1914-15 (1/2 yr.)	159	83	45	30	26	343
To Feb. 1, 1915	172	89	54	36	28	379

STATISTICS OF REGISTRATION

TABLE I

<i>College or School</i>	<i>1913-14</i>		<i>1914-15</i>		<i>First half 1915</i>		<i>To Feb. 1, 1915</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
Arts and Science	40	106	39	101	48	111	50	122
Engineering	64	..	71	..	83	..	89	..
Mining	29	..	28	..	30	..	36	..
Agriculture	35	..	29	..	40	5	46	8
Education .....	..	20	..	24	..	26	..	28
Totals	294		292		343		379	

COUNTIES AND STATES REPRESENTED

TABLE II		1912-13	1913-14	Ft.
NEVADA—				
Churchill County	.....	6	8	
Douglas County	.....	7	6	
Elko County	.....	12	9	
Esmeralda County	.....	7	9	
Eureka County	.....	4	2	
Humboldt County	.....	7	7	
Lander County	.....	1	2	
Lyon County	.....	10	8	
Mineral County	.....	2	--	
Nye County	.....	8	8	
Ormsby County	.....	3	2	
Storey County	.....	4	7	
White Pine County	.....	2	3	
Washoe County	.....	147	152	
Clark County	.....	--	1	
OTHER STATES—				
Arkansas	.....	1	--	
Australia	.....	1	--	
Canada	.....	1	1	
California	.....	58	58	
Illinois	.....	2	1	
Iowa	.....	1	--	
Indiana	.....	2	--	
Massachusetts	.....	1	--	
Mississippi	.....	1	--	
Missouri	.....	1	--	
New York	.....	5	3	
Oregon	.....	1	--	
Rhode Island	.....	1	--	
Texas	.....	1	1	
Washington	.....	2	--	
Alaska	.....	--	1	
Kansas	.....	--	2	
Connecticut	.....	--	1	
Mexico	.....	--	1	
Michigan	.....	--	1	
Tennessee	.....	--	1	
Wyoming	.....	--	2	
Colorado	.....	--	--
Kentucky	.....	--	--
Wisconsin	.....	--	--
North Carolina	.....	--	--
Totals	.....	294	292	

Comparison of Increase in Attendance.

As a comparison of the growth of the University of Nevada other colleges and universities of the United States, I submit the following statistics:

NUMBER OF STUDENTS IN THE UNIVERSITIES AND COLLEGES OF
UNITED STATES

For the year 1910-11	.....
For the year 1912-13	.....
Increase	.....
Per cent of increase	.....

For the same period in the University of Nevada the following statistics are submitted:

Enrollment for the year 1910-11	.....
Enrollment for the year 1912-13	.....
Increase	.....
Per cent of increase	.....

The enrollment at the University in 1913 was 38.6 per cent greater than two years previous, and 46 per cent greater than four years previous, an average increase of 11.5 per cent per year for the four-year period.

This year's enrollment shows an increase of 25.68 per cent ahead of last year.

Aid for Self-Supporting Students.

During the biennial there have been movements inaugurated to provide funds for deserving students. These funds have taken the form of loan funds to be repaid by the student within reasonable time, in some instances without interest.

There is now available for this purpose the David Russell Loan Fund, which amounts to \$19,450.69, the interest upon which will be used for loans.

The Grand Lodge of Masons of the State has also raised a fund of some \$700, which it is purposed to loan to the sons or daughters of Masons deserving assistance.

We are unofficially informed also of a fund of \$600 left by the late O. W. Ward, which is to be used likewise as a loan fund.

The University also grants employment to students in the way of assistance in janitor service, the up-keeping of the buildings and grounds, and in clerical duties in the several departments. It is the policy of the University to make it possible for any well deserving student to participate in the educational advantages of this institution. The University feels it a duty to make its educational advantages accessible to any young man or woman of the State who is earnest and right spirited.

Not only does the University feel that it should assist in a financial way, but that it should take upon itself the responsibility of caring not only for the educational equipment, but for the health and proper surroundings of those who are seeking education within its halls. It, therefore, provides excellent facilities in physical training both for men and women, and for those who are ailing, it provides hospital accommodations and attendance, to the end that it may keep health prevalent among its students. In its dormitories it provides careful supervision of habits and conduct.

Subcollegiate Students.

We recognize there is a difference in opportunity to students located in the various districts of this great State, and, in order not to place those that are less advantageously situated at a disadvantage, the University will receive students who are not able to fulfil in full the entrance requirements, and will make provision for those who have been insufficiently trained to receive instruction in studies which they must have as prerequisites to courses in the University.

The only condition which it places upon this is that the student should be of sufficient age and sufficient earnestness, that the University is satisfied that they are coming here for an education.

Extension Students.

It is hoped that within the next biennial the University will be able to take its education into the State, in order that those who are unable to receive an education within the halls of the University may still have some of the advantages of University training.

With the cooperation of the public and high schools of the State the University will gladly give short courses either through correspondence or through a series of lectures delivered in school buildings and particular localities. This it will do when a sufficient number indicate a desire for the work.

It will be the policy to distribute whatever information or knowledge the University may have in the sciences or in the arts in such a way as to reach the largest majority of people in the State.

For the adult population the University sends out extension workers who will remain in the several localities for periods of time sufficient to permit of their consultation by anyone who feels that the information that the worker has to impart may be of advantage to his particular work. This, likewise, can only be of service to the State when there is cooperation between the districts and the extension workers.

The Extension Department is equipped to give thorough and reliable information on the economic production of crops; the treatment of the different soils of the State in such a manner as to secure the largest returns from the land without impairing its fertility; the principles of breeding and management of livestock, including animal diseases, and a thorough knowledge of the various breeds and market classes; the economic and sanitary production of dairy goods, the best methods of meeting the existing market demands, and the extending and development of trade of the agricultural products in the State.

The University also has an extension worker in Home Economics who will bring to the housewife suggestions which will help to make her life less irksome, and will introduce methods for the lessening of labor and drudgery, and the better utilization of foods; and these services are given without expense either to the State or to the individual.

Smith-Lever Extension Act.

We desire to call your attention to the requirements of the Smith-Lever Extension Act, and to ask that you request the Legislature to accept this Act and appropriate such moneys as are necessary to fulfil the contract undertaken therein.

SURVEY OF THE COLLEGES

Arts and Science.

The new curriculum of Arts and Science is constructed to accomplish a two-fold purpose:

First, to lay a foundation for the professions both learned and technical.

Second, to increase knowledge in and sympathy toward the broader and cultural aspects of life.

The College hopes to accomplish these things by compelling students to distribute their work over one of four groups of departments so that the student in his college course has laid a broad foundation. Again, by compelling students to select one department in which he must do most of his work for the four years, and one or two correlated departments in which he must study consecutively for two years, insures the thoroughness and insight for intelligent interpretation of the things of life.

The College supplies an advisory committee who will interpret to the student the various courses which may be best pursued for the results desired.

College of Engineering.

The College of Engineering is now well equipped and is ready to prepare students for mastery in the fundamental engineering courses which are in popular demand. It is not the policy of the College of Engineering to offer courses in which two or three students may be enrolled. It conserves its efforts and uses its faculty to accomplish proficiency in a few well-defined courses, the courses which bear an important relation to the technical development of the State.

That it has accomplished results is evidenced by the fact that its graduates are occupying important positions in engineering sciences in the State.

Your attention is called to the report of the Dean which is appended hereto.

It is the belief of the College of Engineering that they could successfully carry on an experiment which would help to conquer the desert areas of Nevada by providing training to young men suited to solve the difficulties of the engineering of irrigation.

College of Agriculture.

The University realizes its obligation to develop a strong College of Agriculture. It is the well-founded belief of our thoughtful citizens that the future of the State depends upon the establishment of a permanent form of agriculture here. Because of the peculiar conditions of the State, the problems of agriculture are ones which cannot be solved from a copying or a following of the practices of other States whose climatic and soil conditions are so different from ours. The problem is a particular one. It comprehends not only the study of soils and soil fertility and farm management, but problems of irrigation and economics. For the successful accomplishment of farming operations there is the necessity of coordinating farming and stock-raising; and the young man best trained to be successful in farming in the State needs to know the best practices which the College of Agriculture, with additional instruction in engineering and commerce, can supply.

The report of the Dean of the College of Agriculture indicates how the University will seek to bring this information to the attention of our boys and girls.

The Federal Government has long realized its obligations to the States to supply them with the best knowledge and practices for the use of the farming population. The University through the assistance of the Federal Government and the State Government supplies to the State not only instruction, but in addition conducts experiments which are purposed to solve the particular problems of agriculture in the State. That the information which it possessed may not be confined to a few, it also provided for this information to be taken out into the State and given to those who are actually engaged in the operations of farming.

There is a realization, therefore, that scientific agricultural knowledge should be more widespread. The University has not, up to the present time, endeavored to give of its knowledge to those who are unable to enter either through meagerness of preparation or because of home demand for their labor during crop time.

It will be our purpose to provide courses in the Agricultural College for the sons and daughters of the citizens of the State who, feeling that they

have not either the regular entrance qualifications or the time or the means to take the regular college course ending with a degree, and yet who may come here for a short course running over a period of two years and extending for a time not to exceed six months in each year. These courses will demand no entrance requirements. The only conditions which the University will place upon them will be that the student must be of mature age and serious minded. In this way it is hoped that the College of Agriculture will train young men and women who will return to their parents' farm and will make farm and home life more successful.

College of Education.

There is appended hereto the report of the Dean of the College of Education, which contains a statement of the history of the Nevada State Normal School and the College of Education. I should like to draw your attention to a provision of the law: Section 1 of an Act of the Legislature, approved February 7, 1887, which reads as follows:

There shall be established in the State University of Nevada a school for the instruction of teachers, in which there shall be taught all the branches of instruction which are taught in the common schools of the State, together with the theory and practice of teaching, school law, botany, physiology, and geology. There shall also be taught in said University chemistry, assaying, mineralogy, surveying, and geology so far as they relate to the theory and practice of mining, agriculture, and mechanic arts. There shall also be taught in the Preparatory Department of said University typewriting, shorthand, telegraphy, bookkeeping, and commercial law so far as they relate to the practical affairs of life.

From this it will appear that upon the University is imposed the obligation of the preparation of teachers for the elementary schools of the State, in addition to the preparation of teachers for the high schools, and of the instruction of students in the arts and sciences relating to agriculture, mining, etc.

Through the College of Education the University is now supplying a part of the need for training of elementary school teachers. It is proposed, however, at this time to reestablish in connection with the University a department known as the Nevada State Normal School, which shall have for its primary purpose the training of teachers for the elementary schools. It is proposed to admit students of two classes:

First, graduates of the Junior and Senior College of the University of Nevada;

Second, graduates of a four-year high-school course.

For the first class there will be provided courses lasting for eighteen weeks, resulting in qualification for elementary school teacher's certificate qualifying for teaching in the elementary schools.

For the second class there will be provided two-year courses such as are given in the well-established normal schools of other States, resulting in elementary school teacher's certificate; or a one-year course, such as is now given in County Normal Schools, resulting in a nonrenewable limited certificate.

Recognition of County Normal.

The Nevada State Normal School will recognize the County Normal Schools by granting credit to their graduates for one year of the two-year course, provided these County Normal graduates have received the full four-year preparatory course of the High School.

The University will again recognize the graduate of the Nevada State Normal School by granting credit for the two years' work in the Normal

School of forty-eight units in such courses as it will be possible for such students to take.

University Department of Education.

In the Department of Education in the University, to which name the College of Education will now be changed, we shall aim to qualify graduates of the University in specialties in accordance with the major subjects they are pursuing for a degree. This will be accomplished by establishing in each department courses in the methods of teaching in these departments and by maintaining in the Department of Education the theoretical pedagogical studies which will qualify our graduates for teachers.

Method of Control.

In the conduct of the Nevada Normal School, we shall seek the cooperation of the State Board of Education, and will ask that it shall be administered by the President and Board of Regents of the University with the advice of a committee of school men nominated by the State Board of Education. The agreement, which has been maintained for several years with the Public School Board of the city of Reno, whereby the students of the Department of Education and the Nevada State Normal School have been privileged to conduct their practice teaching and observations in the various class rooms of the public schools, we shall hope to continue. The young girls and boys who shall attend the Nevada State Normal School will be housed in the dormitories of the University and will be granted the very closest and efficient supervision.

It would seem a wise policy for the University and the State Board of Education to cooperate in making the Board of Control of the County Normal Schools and the State Normal Schools identical so as to provide for a uniform course of study, so well integrated that the granting of credit by the State Normal School to a County Normal School would work no injury to the State Normal School. If possible, therefore, I advise that the Board of Control of the State Normal School and the County Normal School should be identical.

Summer School.

There has been conducted by the University's Department of Education for a number of years a summer school. I understand from many teachers, and from the Superintendent of Public Instruction, that the service rendered by this school has been very beneficial to the teachers of the State. It would seem, therefore, that it should be continued; but if it is continued it should receive from the State an appropriation which would permit of its being well conducted. The appropriation of the last biennial was insufficient, and I suggest that you ask the Legislature for the sum of \$4,000 to be devoted to this purpose.

The Library.

The University Library is now housed in very comfortable and commodious quarters, and is very efficiently conducted by the present Librarian.

It is hoped that the Board of Regents will adopt a policy which will say to the Library Committee of the University that there will be a continuous appropriation from year to year for the purchase of books and periodicals for the use of the students and faculty of the University. I suggest that this amount be established at \$7,500 per year to begin

with, and that it be increased by an amount equal to 10% each year, so that the Committee may be assured of a definite sum of money for the operation of the Library.

In its future administration, the control of its policy in the purchase of books and periodicals shall remain with the Committee of the University Senate, who, acting with the consent and approval of the President and the Board of Regents, shall adopt the policy which shall contemplate the providing in the Library of the most suitable books and periodicals for the carrying out and supplementing of the teaching of the various departments of the University.

UNIVERSITY FUNCTIONS

During the last biennial the University has endeavored on several occasions to perform functions for the welfare of the industries of the State. In March, 1914, there was conducted under the auspices of the University a "Safety First" conference. The conference was held under the auspices of the Engineering School of the University, cooperating with the Nevada Industrial Commission, the State Mine Inspector, a number of labor organizations, and the management of the various industries of the State. The meetings were attended by some six hundred delegates and visitors from all parts of Nevada. The addresses were of unusual merit and were printed as a bulletin by the University for gratuitous distribution. Calls were received for this bulletin from all over the United States, due to the fact that it contained a great deal of original matter of general interest. Many of the addresses were published in the technical press.

As a result of the conference, a State Industrial Safety Association was formed, whose membership was made up of most of the large mines, railways, power plants, and labor organizations of the State. Over three thousand pieces of safety literature were distributed, and thirty-two first-aid teams were trained by crews loaned the association by the United States Bureau of Mines and American Red Cross.

During the summer of 1914 a University representative visited Ely, McGill, Virginia City, Goldfield, Tonopah, Blair, and other mining centers with the mine-rescue car, and practically every railroad shop and power plant in the State was covered through the medium of the Red Cross car. At Ely and Tonopah Districts, first-aid meets were held; on Labor Day the University of Nevada and the Nevada Industrial Safety Association conducted a mine-rescue and first-aid field meet, which was attended by three thousand people.

To further advance the interest in this work, it is planned to send teams representing the State to a national contest to be conducted in San Francisco during the exposition period.

During the conference a number of locomotive headlight tests were conducted under the direction of the Department of Electrical Engineering of the University, which resulted in revolutionizing the lighting methods in use on the western railroads. Headlight legislation in a number of States is being changed to permit the use of the scientific method demonstrated at the conference.

Collection of Exhibits for Exposition

During the year the State Exposition Board has asked of the University cooperation through certain of its departments in the collection

of exhibits for the Panama-Pacific Exposition, and the exposition at San Diego. This service has been cheerfully and freely given that the State may be well and creditably represented. The University has assumed no responsibility in the expenditure of the funds, simply performing the service under direction of the State Exposition Board.

Public-Service Division

For many years the State University has been performing the functions of several public-service bureaus, as for example, the State Hygienic Laboratory, the State Analytical Laboratory, the State Pure Food and Drugs and Weights and Measures Laboratories, and in addition has been performing soil analyses; also a member of the faculty has been performing the duty of State veterinary officer.

It seems to us very desirable that these separate and disintegrate departments should now be united under a heading known as the "Public-Service Division of the University." The funds should be combined in one sum and should be placed under the direction of the Board of Regents, who shall designate the individual in each case who shall perform the public service desired. In pursuance of this policy it will be possible to make better use of the money and of the men available.

The University would prefer if, in the administration of these departments, the police powers of the State should not become a part of the duty of the Public-Service Division of the University. We should feel it our duty to perform any duties which the men and laboratories of the University can perform, and to advise the Governor of the State when any of the laws are being violated, leaving with that official the enforcement of the laws in the circumstances as they appear. We regard our function in all of these matters as educational: the laboratories of the University are available for the discovery of such information as is necessary for the welfare of the State and enforcement of its laws. Once we have discovered this information we feel that it would be advisable to leave the enforcement of the regulations which will compel the citizens to obey the laws, in the hands of the Governor of the State.

PHYSICAL PLANT AND EQUIPMENT

The Legislature at its last session granted to the University funds for the construction of a Library, a Dairy Building, the improvement of Lincoln Hall, and of the grounds of the University, and in general provided better facilities for the students. It placed also in the hands of the Board of Regents a fund under which the business reorganization of the University might be accomplished. It is our belief that these funds have been wisely and productively spent. The University has profited by the better housing of its library, and by an equipment by which it is now able to teach the best principles of dairying. The grounds have been improved and the University Hill is fast becoming beautiful.

Probably the most essential work of the last biennial was the business reorganization of the University under which approved business methods now obtain. The business office of the University now possesses such a well-integrated system of requisitions and accounting that the greatest care and supervision is given to the purchasing of supplies, the checking of delivery of the same, and of the bills therefor. It is our belief that the emphasis of care should be placed on the creation of a liability rather than the scanning of accounts after liability is incurred. Once an official,

authorized to purchase, has contracted a liability, it will of necessity have to be paid. The essential question is, should the liability have been incurred? Herein the present requisition system is strong, since requisitions must be drawn against a budget appropriation of the Board of Regents for a particular purpose; in addition, the requisition carries the name of the head of the department, the Comptroller, and the President of the University. This system implies care and control of the University funds.

The present system of payment of University accounts payable out of state appropriations is cumbersome and expensive. It is hoped that the Board of Regents and the state department concerned will cooperate so as to make it possible for the University to pay cash for all of its purchases. It does so now for all purchases made out of federal funds, as these are entirely within the disposal of the Board of Regents. It is our belief that at least 10 per cent of the state funds would be saved if the prompt payment of accounts could be secured.

ADMINISTRATIVE CHANGES

During the year 1914 the Board of Regents established, in connection with the University, some new features in administrative control. A Dean was appointed to act as executive head of each of the colleges. This action imposed upon the University a reorganization of the function of the Faculty Committees. It had been the custom for faculty committees to perform certain administrative duties. Under the new organization the committees become legislative committees of the particular faculties; that is, they advise as to any change, rules, regulations, or general course of study which may seem desirable to keep the particular college abreast of the times.

ADMINISTRATIVE POLICIES

Carrying out this action of the Board of Regents, a new administrative system of the University is to be established. An attempt will be made to distinguish between the functions of the several colleges, and unite their functions in the University. There will be established a University Senate, made up of the President, Vice-President, the Deans, and the Heads of Departments in the University who hold professorship rank. To this particular body will be given the duty of defining the University's educational policy, and it will be the duty of this body to coordinate the work of the various colleges so as to insure unity of purpose.

The administrative function of the University is in the hands of the President, who is advised by a Council of Administration, made up of the Vice-President and Deans of the Colleges. To this Council is assigned the duty of administering the educational affairs of the University along the lines laid down by the University Senate.

The colleges are organized with faculties, the Dean of the college being the presiding officer. The faculty of the college determines those educational questions which have to do particularly with the work of each college, but they are not permitted to legislate upon anything that would deprive the student of any university privilege.

You must recognize that we have several distinct lines of education represented by our several colleges, and it would seem proper that the instructors that have the particular instruction in charge should have large voice in the direction which it should take. Whenever this does

not conflict with the general educational purposes of the University, each faculty is practically autonomous.

The administrative function of the Dean is coordinate with the legislative power of his faculty. All faculties and all officers of the University report direct to the President, who in turn submits their action to the Board of Regents for approval.

RECOMMENDATIONS FOR THE YEARS 1915-1916

1. Maintenance.

In the organization of the University it has been possible to reduce certain of its departments so as to accomplish economies in the maintenance funds. These economies, however, have been offset by increased demands for instruction in departments which are now overcrowded, and, also, by certain increases granted members of the faculty at the June meeting last of the Board of Regents. It does not seem possible without destroying the efficiency of the University to reduce either the number of the faculty or to economize on their pay, because of the fact that increases in salary were only recently made. It seems to me inadvisable to recommend any increase in the present scale except in a few minor cases in which the obligation of the Regents has been given.

This will leave the University demanding of the State for its maintenance a sum increased only by a percentage over the sum granted in previous years. This increase should be proportional to the increase in attendance. Since the increase in attendance of this year over last college year is 25.68 per cent, it seems reasonable that a request for maintenance should approximate this amount.

The heads of the departments, the Deans of the colleges, and your President and Comptroller have made a very careful estimate of the needs of the University in its several departments in these maintenance funds. Their conclusions are contained in the estimates which will be found in the Comptroller's report. In each instance the request is supported by a budget.

2. Agriculture Building.

A survey of the University and a study of its history and its support convinces me that the emphasis for the next few years should be placed upon the development of a strong College of Agriculture, as the greatest need of this State seems to be the development of permanent form of agriculture.

The University now has a very excellent equipment and is giving excellent service through its Department of Arts and Science and its Colleges of Engineering and Mines. Agriculture, however, has no home upon the hill, and agriculture in a permanent form embodies the future welfare of this State.

I, therefore, recommend that you ask of the people of this State an equipment in agriculture commensurate with the needs of this State and the duty imposed upon this University.

For the information of yourselves and the people of the State, I tabulate (see page 42) the methods of support of the University since its inception. This is done more as a matter of putting it upon record than as a challenge upon the State's generosity. I think it right that the people should know how their State University is supported and upon what funds it has had to rely in granting the service to the State which it has.

TABLE SHOWING INCOME FROM ALL SOURCES FROM 1885 TO 1913, INCLUSIVE

Years	1 Total U. S. appro- priations	A Smith-Lever	2 Morrill	3 Nelson	4 Hatch	5 Adams	Land Grants		
							6 90,000-Acre	7 72-Section	8 Total
To June 30, 1888	\$11,250.00				\$11,250.00		\$3,206.57	\$1,405.74	\$4,610.31
To June 30, 1889	15,000.00				15,000.00		3,181.86	1,498.50	4,674.36
To June 30, 1890	30,000.00				15,000.00		8,706.19	1,238.03	4,943.22
To June 30, 1891	31,000.00				15,000.00		8,500.00	1,000.00	4,500.00
To June 30, 1892	32,000.00				15,000.00		4,362.70	994.07	5,356.77
To June 30, 1893	33,000.00				15,000.00		4,287.90	974.51	5,262.41
To June 30, 1894	34,000.00				15,000.00		5,080.00	1,876.04	6,456.04
To June 30, 1895	35,000.00				15,000.00		5,641.72	1,871.60	5,013.32
To June 30, 1896	36,000.00				15,000.00		5,651.33	2,208.37	7,759.70
To June 30, 1897	37,000.00				15,000.00		3,405.29	1,427.49	4,832.78
To June 30, 1898	38,000.00				15,000.00		4,486.98	1,953.08	6,340.06
To June 30, 1899	38,000.00				15,000.00		4,300.71	1,899.02	6,199.73
To June 30, 1900	40,000.00				15,000.00		4,495.27	1,927.83	6,414.10
To June 30, 1901	40,000.00				15,000.00		4,405.49	1,927.06	6,332.55
To June 30, 1902	40,000.00				15,000.00		4,385.91	1,927.35	6,313.26
To June 30, 1903	40,000.00				15,000.00		4,269.79	1,899.27	6,169.06
To June 30, 1904	40,000.00				15,000.00		4,231.32	1,915.11	6,146.43
To June 30, 1905	40,000.00				15,000.00		4,286.82	1,912.09	6,197.90
To June 30, 1906	45,000.00				15,000.00	\$5,000.00	4,570.20	2,102.25	6,672.45
To June 30, 1907	47,000.00				15,000.00	9,000.00	4,484.26	2,219.96	6,704.21
To June 30, 1908	54,000.00				15,000.00	10,000.00	4,389.45	2,083.14	6,472.59
To June 30, 1909	61,000.00				15,000.00	11,000.00	8,943.00	2,092.49	8,940.49
To June 30, 1910	68,000.00				15,000.00	13,000.00	4,427.14	1,974.91	6,402.05
To June 30, 1911	76,000.00				15,000.00	15,000.00	4,093.12	1,754.12	5,782.24
To June 30, 1912	80,000.00				15,000.00	15,000.00	4,375.48	1,840.89	6,015.34
To June 30, 1913	80,000.00				15,000.00	15,000.00	4,718.33	1,943.84	6,662.17
To June 30, 1914	80,000.00				15,000.00	16,000.00	5,173.41	2,409.84	7,583.25
To Dec. 31, 1914	45,000.00	\$5,000.00	12,500.00	12,500.00	7,500.00	7,500.00			
Totals	\$1,946,250.00	\$5,000.00	\$682,500.00	\$137,500.00	\$408,750.00	\$112,500.00	\$114,794.24	\$46,838.42	\$151,632.66

TABLE SHOWING INCOME FROM ALL SOURCES—Continued

Years	9 State tax for University	10 Biennial appropriation from General Fund	11 Total biennial state appropriation	12 Total United States appropriations and land grants	13 Mackay	14 Assessed val- uation includ- ing proceeds of mines	15 Tax rate for state	16 Tax for support of University	17 Assessed val- uation state properties (not including mines)
To June 30, 1888	(*)	\$16,450.78	\$16,450.78	\$19,674.98		\$28,847,671.36	\$0.90		\$26,788,378.68
To June 30, 1889				84,943.22		27,915,174.76	.90		26,629,681.21
To June 30, 1890				84,943.22		26,850,094.08	.90		24,663,384.87
To June 30, 1891				36,600.00		30,670,488.09	.75		29,807,542.96
To June 30, 1892		8,000.00	8,000.00	37,256.77		31,318,556.38	.75		31,096,340.96
To June 30, 1893				38,242.41		26,385,674.91	.90		26,178,000.96
To June 30, 1894		6,000.00	6,000.00	40,456.04		23,810,015.33	.90		23,628,720.40
To June 30, 1895				40,013.22		23,728,461.05	.90		23,555,722.23
To June 30, 1896		36,000.00	36,000.00	43,769.70		23,458,468.63	.90		23,106,184.09
To June 30, 1897				41,632.76		23,497,248.30	.90		23,046,197.54
To June 30, 1898		27,764.20	27,764.20	44,340.06		23,617,245.39	.92		23,187,211.16
To June 30, 1899				46,169.78		23,662,709.69	1.00	\$0.07	23,566,458.36
To June 30, 1900		4,376.33	29,904.67	46,414.10		24,296,767.22	1.00		24,180,566.77
To June 30, 1901				46,332.68		23,391,253.25	.80	.066	23,096,781.67
To June 30, 1902		16,500.00	42,997.24	46,313.36		23,831,876.76	.80		23,324,696.80
To June 30, 1903				46,196.48		33,161,688.47	.75	.067	32,707,468.60
To June 30, 1904	99,804.90		30,489.98	46,169.06		37,196,769.63	.75	.067	36,270,185.30
To June 30, 1905	16,026.55			46,197.90		43,239,684.89	.75	.067	41,645,100.63
To June 30, 1906	19,621.76	27,415.65	64,972.43	51,672.46		46,845,009.08	.75	.067	44,464,997.68
To June 30, 1907	26,967.83			53,704.21		71,896,281.63	.70	.067	68,084,765.96
To June 30, 1908	31,128.31	56,884.43	118,480.47	60,472.69		77,010,251.80	.60	.067	73,866,142.43
To June 30, 1909	31,676.20			66,940.46		79,610,232.09	.60	.067	76,325,600.94
To June 30, 1910	33,984.84	127,669.18	183,219.22	74,402.06		87,429,306.66	.60	.06	83,547,979.06
To June 30, 1911	36,227.40			80,762.24		96,170,227.88	.60	.06	92,354,220.72
To June 30, 1912	51,612.67	168,130.00	289,969.97	86,015.84		101,067,079.98	.66	.06	97,594.54
To June 30, 1913	57,594.54			96,662.17		112,210,468.66	.60	.08	107,794,729.93
To June 30, 1914	Not complete	49,800.00	106,894.54	87,688.25		Not in			
Totals	\$389,168.93	\$627,179.69	\$916,348.52	\$1,402,882.66	\$245,000.00				

*Years in columns 9 and 10 end December 31, instead of June 30, account state year.

A recapitulation of this table is given on the following page (page 44).

RECAPITULATION OF FOREGOING TABLE

Column A—Smith-Lever	\$5,000.00		
Column 2—Morrill	582,500.00		
Column 3—Nelson	187,500.00		
Column 4—Hatch	408,750.00		
Column 5—Adams	112,500.00		
Column 1—Total U. S. cash	\$1,246,250.00	Column 1 plus Column 8 equals	
Column 6—90,000-Acre Grant	\$114,794.24		[Column 12]
Column 7—72-Section Grant	46,838.42		
Column 8—Total income land grants	161,632.66		
		\$1,407,882.66—Total U. S. aid.	
Column 9—State tax	\$389,163.93		
Column 10—Appropriations	527,179.59		
Column 11—Total state aid (does not include 1914 taxes)		916,343.52	
Column 13—Mackay cash aid		245,000.00	
Total income all sources		\$2,569,226.18	

ENDOWMENTS

90,000-Acre Grant	\$107,763.84
72-Section Grant	48,610.40
Mackay endowment	150,000.00
Total endowment	\$306,374.24

I also append a tabular statement, showing the value of the buildings and permanent equipment of the University with the date of their construction:

	Total	State	Washoe County	Mackay
1885—Morrill Hall and land	\$28,164.25	\$23,164.25	\$5,000.00	-----
1887—Stewart Hall	18,500.00	18,500.00	-----	-----
1891—Hatch Hall	8,000.00	8,000.00	-----	-----
1895—Lincoln Hall	29,476.45	29,476.45	-----	-----
1896, 1909—Manzanita Hall	43,089.75	43,089.75	-----	-----
1895—Manzanita Hall land	3,000.00	3,000.00	-----	-----
1897—Mechanical Engineering Bldg.	11,498.00	11,498.00	-----	-----
1897—Gymnasium	2,000.00	2,000.00	-----	-----
1899—Experiment Station Farm	12,000.00	-----	12,000.00	-----
1901—Chemistry Building	12,000.00	12,000.00	-----	-----
1901—Hospital	3,500.00	3,500.00	-----	-----
1905—Dining Hall	6,000.00	6,000.00	-----	-----
1905—Mining Lab. (now Physics Bldg.) ..	7,000.00	7,000.00	-----	-----
1905—Equipment for Laboratory	9,000.00	9,000.00	-----	-----
1905—General furnishings of buildings.	2,000.00	2,000.00	-----	-----
1905, 1907—Training Quarters	22,000.00	-----	-----	\$22,000.00
Grand Stand	6,500.00	-----	-----	6,500.00
Field and grounds	23,500.00	-----	-----	23,500.00
School of Mines and furnishings	120,000.00	5,000.00	-----	115,000.00
Quadrangle and walks	8,000.00	-----	-----	8,000.00
Mackay Statue	25,000.00	-----	-----	25,000.00
1907—Walks	5,000.00	5,000.00	-----	-----
1907—Repairs	5,000.00	5,000.00	-----	-----
1907, 1909—Heating Plant	51,000.00	51,000.00	-----	-----
1909—Additional land	2,280.00	2,280.00	-----	-----
1909—Greenhouse	5,000.00	5,000.00	-----	-----
1911—Electrical Building	40,000.00	40,000.00	-----	-----
1913—Library Building	10,000.00	10,000.00	-----	-----
1913—Dairy Building	4,800.00	4,800.00	-----	-----
Totals	\$523,268.45	\$306,268.45	\$17,000.00	\$200,000.00

Additional land	\$5,290.00
Farm and equipment, laboratory	16,000.00
Repairs	5,000.00
Walks	5,000.00
Total	\$31,290.00

RECAPITULATION

Miscellaneous	\$31,290.00
Buildings	274,978.45
Total from State	\$306,268.45

From private sources the University has received for buildings and equipment, \$200,000; for endowment, \$150,000; and for maintenance, \$31,000; all of which amount (\$381,000) has been received from Mr. Clarence Mackay and his mother.

I also desire to submit a table showing the comparative cost of the University maintenance to the State per one thousand dollars of actual

worth of state property. In the case of Nevada, in this table, the assumption is made that the assessed value of the State property is \$138,000,000, which is 60 per cent of the total value of the property, in accordance with the report of the State Tax Commission.

The table is as follows:

Michigan	51 cents
Wisconsin	45 cents
North Dakota	41 cents
Colorado	37 cents
Kansas	30 cents
California	30 cents
Indiana	26 cents
Iowa	26 cents
Minnesota	26 cents
Nebraska	26 cents
Nevada	36 cents

A table, showing the value of the buildings in the several principal universities, is submitted herewith. These figures are of 1912. Figures taken from the report of the University of Texas:

California	\$9,488,000.00
Michigan	6,428,000.00
Ohio	6,253,000.00
Minnesota	6,070,000.00
Iowa	5,684,000.00
Wisconsin	5,660,000.00
Illinois	4,305,000.00
Texas	3,213,000.00
Kansas	2,894,000.00
Colorado	2,619,000.00
Missouri	2,366,000.00
Indiana	2,296,000.00
Nebraska	1,980,000.00
North Dakota	4,190,000.00
Average	4,430,000.00
Nevada	274,978.45

The value of the buildings proportional to the number of students in the University compared with other universities is submitted. These figures for other institutions than our own are for 1911:

	<i>Per each student registered</i>
California	\$2,200
Colorado	1,160
Illinois	900
Indiana	600
Iowa	1,570
Kansas	700
Michigan	980
Minnesota	1,570
Missouri	870
Nebraska	700
North Dakota	1,320
Ohio	1,500
Wisconsin	1,380
Average	1,150
Nevada	728

It should be noted that since 1911 Kansas has added a \$650,000 Agricultural Building.

If the University of Nevada had \$2,200 worth of buildings per registered student, as the University of California now has, it would have \$833,000 worth of buildings rather than \$274,978.45 as at present.

From the foregoing it seems just to conclude that if we are to maintain

the University on a plane of efficiency equal to other like institutions in other States, we must ask for equipment which will make this efficiency possible. In pursuance of this idea I conceive that the University's greatest need at the present time is a building in which to house its College of Agriculture.

College of Agriculture.

In order that I may make plain the reason why it is felt that a College of Agriculture is essential to the life of this State, I take the liberty of submitting hereunder a statement of what departments are included in such a college, and these are the departments which we would hope to house in this building.

Department of Biology: This department in its scope comprehends the promotion of human health and the prevention of sickness through personal hygiene and home sanitation; also sanitation as applying to mining communities and on the farm; it comprehends the knowing of plants and animals, their make up, their living activities; the laws of life, such as those of heredity; their relations to one another and to man. Biology also comprehends economic zoology and botany, dealing especially with mammal and insect pests, with plant parasites, and plant diseases. It also offers preparation to students for the study of medicine, dentistry, and the profession of nursing. It also comprehends bacteriology or the study of germ life, especially in relation to soil fertility, dairying, plant, animal, and human diseases.

Department of Agronomy: This department gives instruction in those subjects which relate to the field and its affairs, as drainage, farm management, farm crops; the chemistry, physics, and bacteriology of the soil; manures and rotation in their relation to fertility; plant breeding.

The Department of Animal Husbandry: This department comprehends the separate study of sheep, swine, poultry, beef cattle, and their products; light and heavy horses and their care and training; management of herds, flocks, and studs; and the principles and practices of feeding, breeding, and marketing; the chemical, and physiological phases of animal nutrition.

The equipment suited to the proper instruction and investigation of this department would include a college farm whereon investigations in feeding, breeding, and the management of livestock can be carried on. This equipment should consist of modern buildings in which to house beef cattle, swine, sheep, horses, and poultry, with the appliances necessary for individual and collective feeding tests.

In order to make this work effective, the University should possess herds, flocks, and studs in sufficient number that the investigations in feeding and breeding may be such as will illustrate the best breed types and characteristics.

The Department of Dairy Husbandry: This department comprehends courses in economic milk production; the city milk supply; dairy bacteriology; and dairy manufacture. It will be best conducted if the University possesses dairy herds of two types, one a grade herd and the other a pure-bred herd. It is evident that in order to carry on investigations which will give greatest results in feeding and breeding, that the University must have the use of a College Farm.

The Department of Horticulture: The Department of Horticulture usually

comprises five divisions: pomology, olericulture, floriculture, landscape gardening, and forestry, and sometimes subjects dealing with the principles and practices that are applicable to all of these, such as plant diseases, spraying, the evolution of horticultural plants, etc.

Home Economics: This department supplies the needs of two classes of students: (a) those who specialize in other lines of work but desire a knowledge of the general principles and facts of household science; (b) those who desire to make a specialty of household science.

In the first of these divisions the department becomes useful to all other departments of the University; in the second it is particularly useful to those who desire to become perfectly familiar with the best practices in the household arts and sciences. The content and usefulness of the courses in household sciences are best stated in a listing of the courses by name: The selection and preparation of foods; the economic uses of foods; the problems in the preparation and service of foods; the principles of diet; the relation of food to health; the influence of age, sex, and occupation on diet; the construction of dietaries; a dietetic treatment of certain diseases; food and nutrition; the application of the principles of pure science to the chemical, physical and bacteriological problems of food nutrition; lunch-room management; home architecture and sanitation; elementary home decoration; theory of color and its application in home decoration; household management; textiles; the principles in judging cloth and in weaving; materials suitable for various uses in home and in clothing; textiles, quality, and color in relation to environment and personality; hygienic properties and cost; economics of the family group; economic relation of the family as a whole and as individuals: the retail markets; sources of income; social and industrial conditions affecting it; child labor; the economic position of women.

Department of Veterinary Science: In this department the student is instructed in studies relating to the prevention of diseases among domestic animals, and their treatment when afflicted by disease. We would propose also to house in this building the State Hygienic Laboratory which will be used in conjunction with the performance of the public service division of the University in these departments.

It is humiliating to have to announce that at the present time these departments are not well taken care of. They are finding a place in our poorest building, and in very much confined quarters. The economic welfare of the State through its agriculture and stock industry demands that these things be changed, and I very strongly recommend that you ask of the State Legislature an appropriation to provide a building suitable for the housing of these departments.

The College Farm.

An investigation of the practices of the better of our state universities will disclose the fact that very valuable service to agriculture and stock-raising in the State is given through the practice on a college farm of the teachings of the several departments of agriculture; more especially the principles of breeding and care of the various kinds of stock is estimated as of vast importance to the stock herds within the borders of the State. While the University has been spending considerable money in its herds and flocks, it has not been in a position, nor is it now, to be of much service to the stock industry of the State. Its need is a farm of such pro-

portions and with such equipment as will render it effective in serving the stock industry of the State.

In my judgment the conduct of the college farm should be under the advice of a committee of the Cattle Owners' Association, and I recommend, therefore, that there be provided for the use of the College of Agriculture a college farm, properly equipped and stocked, to be conducted under the administration of a committee named by the Governor from among the members of the Cattle Owners' Association of Nevada, in order that we may have a definite relation to the livestock industry of the State and its problems.

Public-Service Division.

It has been the practice in this University to perform certain state public-service duties through certain bureau heads not very closely related to the President and Board of Regents. This does not seem to me a good practice if the President and Board of Regents are to be responsible to the people of the State for the expenditure of their money. All duties imposed upon the University should come directly and minutely under their control, and I therefore recommend that whatever public service the State requires should be performed by the State University; that it be included within the comprehensive term "Public-Service Division of the University," and administered by the President and Board of Regents as are all other departments of the University.

The Comptroller's report will show what these departments are, and what the estimate for the maintenance is for the ensuing two years. This estimate is based upon the expenses for the past two years and it is believed to be accurately stated.

It does not seem out of place here to state that the Department of Veterinary Science has saved this State upwards of \$300,000 in this last year alone in the control of animal diseases. It is hard to estimate indeed what the actual saving has been, but when an epidemic breaks out in a large herd, which, if not controlled, would usually wipe it out, it becomes easily seen that the value of the department to the State depends upon its efficiency. Its efficiency depends entirely upon its good support and its selection of men. We believe our present department is very ably equipped and able to cope with the most serious of animal diseases.

This is likewise true of the other departments which have a public function. The service which the State Analytical Laboratory has been to the prospector of the State is inestimable; likewise, the control of the state health conditions by the State Hygienic Laboratory has a value which is indeed hard to estimate.

These matters are vital, but the other departments of the public service have to do with the agricultural development of the State, namely, the soils laboratory, the engineering experiment, the Agricultural Experiment Station, and the Smith-Lever extension work which brings our information to the attention of the adult farmer and his family. The improvement which will result to farming operations from these activities would be hard to estimate, but surely will be many times beyond the appropriation asked for.

It may seem to some that the request for a College of Agriculture Building and a College Farm is more than the State can bear, but it must be remembered that in both of these institutions, if a sufficient amount of money is appropriated, it becomes an investment rather than

an expenditure. I mean by that, if the appropriation is sufficient to warrant the construction of a building which, when the University has grown, will not have to be torn down and give place to one which will satisfy the needs of the times to come, the State is making an investment. It must be understood that there is a type of building which is a permanent building, and another which is a temporary building. The best universities in the country, notably California, have had to tear down upwards of a million dollars' worth of property which was in the form of temporary buildings, now that they have a plan for building a permanent campus. The type of building we are asking for is a permanent building, of a construction which will endure, and in this sense the request is for an investment on the part of the State, rather than an expenditure.

Likewise, with the College Farm, to purchase a farm in a location which at this time would indicate impossibility of enlargement without great expenditure would be a mistake. We desire a sufficient amount of money to purchase a farm of sufficient size that it may be properly stocked for self support, and fulfil the needs, not only of the University, but of the stock industry of the State. We want it purchased in a location which will make it accessible to the University for use of its instruction departments. It must, therefore, not be very far from the University Campus. We want it in such location that if, in the years to come, we desire to enlarge it, this may be done without exorbitant expenditure.

I should like to suggest that the policy be adopted of cooperation with the Cattle Owners' Association of Nevada in the administering of all funds which are given to the University for the purpose of benefiting the stock industry of the State, in order that the teaching and experimentation conducted by the University may be directed to solve what the stock-owners have found to be their problems.

In conclusion, let me say that I have found the spirit of the institution admirable; have met with cooperation on all sides, with the faculty and employees of the University, and I believe the University has before it a period of service which will result in great benefits to this State.

Respectfully submitted,

A. W. HENDRICK,
President.

COLLEGE OF ARTS AND SCIENCE

December 31, 1914.

To the President, University of Nevada.

SIR: I submit herewith a brief report, chiefly historical in nature, on the College of Arts and Science and the College of Education.

Since only preparatory work was offered in the earlier days of the University at Elko, the College of Arts and Science really began with the transfer of the University to Reno and its reopening in 1886. At first only one year of a college course was given, but in 1888 a full four years' course in the Department of Liberal Arts was offered. The first class completing this course was graduated in 1891. The several names under which the college has been known, with dates under which it had these names and the degree or degrees offered, are as follows:

Department (or School) of Liberal Arts, 1888-1895, A.B.

Department of Liberal Arts and General Science, 1895-1900. A.B.

College of Arts and Science, 1900.

1900-1911, A.B. and B.S.

1911-1914, A.B.

1914, A.B. and B.S.

The number of Arts and Science students in the early days was small and growth was slow. The first important increase came after 1893, when the number of students in the Department of Liberal Arts advanced from 38 in the calendar year named to 49 in 1894, and to 70 in 1895. The most important reason for this increase is probably the lessened demand for labor and the decrease in wages following the financial disturbances of 1893. During the twelve years, 1896 to 1908, the number of students registered was almost stationary. In 1908-09 the college began a period of rapid growth, its students having more than doubled in the six years since that time. This growth is probably due to three principal reasons: first, and likely most important, to the extension of high-school privileges to nearly all parts of the State; second, to a considerable increase in the settled population resulting from the great mining development of ten years ago and its effect on other industries; and, third, to improved economic conditions, especially in agriculture. It is to be hoped that this period of growth will continue for many years to come. The college could train a considerably larger number of students with a relatively small increase of cost for instruction and facilities.

The curriculum has had about the same history as in other institutions. At first, and for several years, the only elective was between French and German. Then a second choice was offered students between Biology and History in the senior year. In 1895 electives were greatly extended, making about one-fourth of the first two years and from one-half to three-fourths of the last two years. In the table given below, which is designed to show the changes in the curriculum and the dates when they were made, units required for graduation are distributed according as they were prescribed, elective within closely limited groups, or either free elective or practically so because of the wide choice per-

mitted. The units given are exclusive of Military Science and Physical Training.

	<i>Units prescribed</i>	<i>Units in limited electives</i>	<i>Units in free electives</i>	<i>Total credits or units</i>
1896	72	0	56	128 (45 min.)
1896	86	0	58	144 (45 min.)
1897	72	16	42	130 (45 min.)
1900	68	16	44	128
1901	74	16	56	146
1903	50	16	58	124
1911	6	12	102	120
1914	12	28	80	120

The table given below shows the recent growth of the College both in its staff of instruction and in the number of its students. It would be difficult to secure information for the years previous to 1904-05, since the earlier registers usually gave the roster of students for calendar years, thus containing the names of all students in attendance for any part of two or three terms or semesters in two different academic years.

Year	Professors			Associate Professors.	Assistant Professors		Instructors.	Assistants (not counting student assistants).	Total Faculty.	Students						
	Primarily in Arts and Science	Primarily in other colleges.	On leave of absence or not teaching.		Primarily in Arts and Science	Primarily in other colleges.				Graduates	Seniors.	Juniors.	Sophomores.	Freshmen	Special.	Total
1904-05	8	2	1	3	1	0	4	4	23	2	12	19	6	18	11	68
1905-06	9	2	0	1	2	0	2	0	16	0	20	4	14	14	15	67
1906-07	8	2	0	2	1	0	2	0	18	2	9	8	8	24	19	70
1907-08	10	3	0	0	2	0	3	0	18	0	8	6	10	22	25	71
1908-09	11	2	1	0	2	0	0	1	17	1	10	8	12	23	25	79
1909-10	10	3	2	1	4	0	3	3	26	4	15	7	14	27	31	98
1910-11	11	2	1	0	4	1	3	1	24	6	8	13	19	26	17	89
1911-12	11	4	1	1	4	1	4	0	26	4	12	12	17	45	49	139
1912-13	11	4	0	1	4	0	3	3	26	6	15	15	33	41	36	146
1913-14	11	4	0	1	4	2	6	1	30	10	14	23	25	39	29	140
1914-15—1st Sem.	12	3	1	3	2	1	5	1	28	11	20	21	22	52	33	159

In connection with this table it should be noted that professors not primarily in Arts and Science teach very few students of this college. On the contrary, the College of Arts and Science gives considerable training to nearly all the students of the other colleges, particularly in the Departments of English, Mathematics, Chemistry, Physics, and Geology, and to a limited extent in the Departments of German, Romanic Languages, History, and Economics.

Respectfully submitted,

JOHN C. WATSON, *Dean*.

STATE HYGIENIC LABORATORY

December 31, 1914.

To the President, University of Nevada.

SIR: In accordance with the provisions of Chapter CCXXX of the Laws of Nevada, approved March 25, 1909, I hand you herewith a report prepared by Dr. Mark F. Boyd, Bacteriologist, which constitutes my third biennial report as Director of the State Hygienic Laboratory:

The services offered by the State Hygienic Laboratory have undergone material extension during the period covered by this report. Previous to July, 1914, the laboratory made examinations for the diagnosis of diphtheria, typhoid fever, tuberculosis, and malaria, together with occasional examinations of water and milk supplies. In July, 1914, a new policy was inaugurated, in which diagnostic facilities were offered to the physicians and health officials of the State for those of the communicable diseases for which we possess reliable means of laboratory diagnosis. The laboratory prepares and distributes to physicians, without cost, typhoid vaccine. Autogenous vaccines will be prepared at the request of physicians. Detailed sanitary examinations of public water supplies in the State will be made, where the water companies will cooperate.

The facilities of the laboratory are not utilized by the physicians to the extent which might be expected. Of the 150 odd physicians in Nevada, but about 40 per cent (63) have utilized the laboratory since its organization. One of the problems confronting the laboratory is the demonstration to these physicians of the assistance which is offered, and through them to the people. However, since the adoption of the extended service, many physicians have utilized the laboratory who previously had never done so.

As stated in Circular No. 2, the laboratory services are offered without charge to those utilizing them. The Bacteriologist devotes his entire time to the work of the laboratory and does not engage in private work.

The total number of examinations made by years since organization is as follows:

1910, 308; 1911, 378; 1912, 276; 1913, 386; 1914, 777.

During the period covered by this report, 1,163 examinations have been made.

Diagnostic examinations have been made as follows:

DIAGNOSTIC BACTERIOLOGICAL EXAMINATIONS

	1913	1914		1913	1914
Typhoid fever—			Anthrax—		
Positive	49	60	Positive	0	63
Suspicious	16	25	Negative	4	8
Negative	108	119	Syphilis—		
Tuberculosis—			Positive	0	9
Positive	25	25	Doubtful	0	2
Negative	95	77	Negative	0	22
Diphtheria—			Gonorrhea—		
Positive	0	46	Positive	0	21
Suspicious	0	3	Suspicious	0	2
Negative	21	17	Negative	0	23
Malaria—			Hookworm—		
Positive	5	3	Positive	0	0
Negative	20	19	Negative	0	2
Miscellaneous bacteriological examinations	16	57			

^aCultures for diagnosis and release from quarantine are not distinguished.

^bOne positive examination for human anthrax infection; the remainder, both positive and negative, are from stock.

NUMBER OF EXAMINATIONS BY MONTHS, 1913 AND 1914

	1913	1914		1913	1914
January	18	33	July	24	73
February	18	32	August	79	108
March	15	55	September	48	90
April	21	22	October	53	72
May	23	27	November	29	85
June	31	57	December	22	100

Laboratory assistance is at the disposal of physicians for the diagnosis of the following diseases: Anthrax, actinomycosis, cholera, dysentery, diphtheria, hookworm, glanders, gonorrhœa, leprosy, malaria, Malta fever, meningitis, pyogenic infections, plague, rabies, septicemia, syphilis, typhoid fever, and tuberculosis. Outfits are supplied upon request for the collection of material to be forwarded to the laboratory for examination and directions are given for the collection of the material.

During December, 1914, the preparations for the complicated and difficult Wasserman test for syphilis were completed and Circular No. 3 was issued to physicians notifying them of the fact. This test is performed every Thursday. This has aroused great interest among physicians, and requests for outfits have been made by physicians who have never before made use of the laboratory. This additional service should prove of great value to the State, as the fees for this test, where privately and reliably performed, run from ten to twenty-five dollars, placing it beyond the means of many people. The addition of a similar test for the diagnosis of gonorrhœa and glanders is planned.

In a further desire to offer all possible accommodation and service to the State, the laboratory will perform such clinical laboratory examinations for physicians as can be made without interfering with the work relating to the diagnosis of the communicable diseases. Such work includes the examination of pathological tissues, blood and other body fluids, and the analysis of gastric contents and urine. One hundred and four such examinations have been made.

At the attending physician's request, the bacteriologist will go to the bedside of a patient for the collection of material, providing transportation to and from the patient is provided.

The laboratory prepares for distribution, without cost, a polyvalent typhoid vaccine put up in vials containing sufficient vaccine for the immunization of four persons. Sufficient vaccine to immunize thirty-two people has been distributed. This is supplied to physicians upon request.

About a dozen autogenous vaccines have been prepared from material submitted by different physicians. These are of considerable value in treating the patient from whom the material was obtained.

If rabies appears in this State, the laboratory will administer the Pasteur preventive treatment to any persons bitten by rabid animals. The treatment will be given without charge. The vaccine will be supplied through the courtesy of the United States Public Health Service.

In the absence of any legal provisions for the supervision of public water supplies by health authorities, the laboratory is endeavoring to secure the interest and cooperation of the different water companies in the regular and frequent sanitary examinations of the water. The Reno Power, Light and Water Company and the Virginia and Gold Hill Water Company have manifested interest and cooperation to this end. One hundred and ninety-two specimens of water have been examined.

Since the middle of June, bacteriological examinations of the Reno

water have been made three times a week. Upon the completion of the coagulation and disinfection plant of the Reno Power, Light and Water Company, experiments were made in November to determine the necessary amount of calcium hypochlorite to be added to the water to secure disinfection. A summary of the results of the examinations before and after the application of hypochlorite to the water is given in the following table:

**SUMMARY OF THE RESULTS OF THE BACTERIOLOGICAL EXAMINATION
OF THE RENO CITY WATER**

Truckee River water before hypochlorite treatment, 63 examinations between June 13 and November 23, 1914:

<i>Bacteria in 100</i>	<i>Percentage of Examination</i>
1-10	28.3
11-20	28.3
21-30	12.6
31-40	8.0
41-50	4.6
51-60	4.6
61-70	1.5
71-80	3.2
81-90	0.0
91-100	0.0
101 and over	11.0
Overgrowth on plates	2.9
Presumptive tests for <i>B. coli</i> positive in:	
10cc quantities of water	74.0
1cc quantities of water	28.5
0.1cc quantities of water	0.0

Truckee River Water since hypochlorite treatment, 13 examinations between November 23, and December 22, 1914:

1-10	77.6
11-20	15.2
21-30	7.7
Presumptive tests for <i>B. coli</i> positive in:	
10cc quantities of water	0.0
1cc quantities of water	0.0
0.1cc quantities of water	0.0

Hunter Creek Water, 49 examinations between August 3 and December 11, 1914:

1-10	32.4
11-20	26.4
21-30	4.4
31-40	2.2
41-50	8.0
51-60	10.0
61-70	4.2
71-80	0.0
81-90	2.2
91-100	2.2
101 and over	8.0
Presumptive tests for <i>B. coli</i> positive in:	
10cc quantities of water	73.5
1cc quantities of water	22.5
0.1cc quantities of water	6.1

Bacterial counts were made upon agar, incubated at 37°C for 24 hours.
Presumptive tests for *B. coli* were made in lactose bile.

In August a detailed sanitary survey of the impounding system of the Virginia and Gold Hill Water Company, in the mountains to the northeast of Lake Tahoe, was made. A few suggestions were made to the superintendent of details which would result in the further protection of this water supply. Since August regular monthly examinations of this water have been made.

A few specimens of the Elko water have been received from the Elko Water and Light Corporation. These had reference to the nature of certain plant growths (algæ) in the reservoirs.

The laboratory will be glad to cooperate with any municipality or corporation supplying water for drinking purposes within this State, to the end that the quality of the water furnished may be safeguarded. This cooperation includes a detailed sanitary inspection of the collecting and distributing system by the bacteriologist, and the regular and frequent examination of specimens of the water. The only cost to those cooperat-

ing are the actual traveling expenses of the bacteriologist while making the sanitary survey and the expressage upon the specimens of water.

A few specimens of cow's milk have been received from people anxious to know whether the milk used would produce disease. The receipt of specimens of this character is always a matter of dissatisfaction, both to the sender and the laboratory receiving the material. The specimens are not collected and shipped in a manner to make them suitable for laboratory examination, and the information accompanying the specimen is so vague as to give no light upon the nature of the desired examination. Furthermore, the detection of disease germs in milk is a very roundabout and uncertain means of ascertaining facts which may be more quickly and accurately determined by a knowledge of the health of the cows producing the milk, and of the conditions under which the milk is produced and handled. The tuberculin test in cows will determine whether a cow has tuberculosis, while bacteriological examinations would only give a definite answer in a small proportion of tuberculosis animals. Cows are not susceptible to typhoid fever and the typhoid bacillus only gains access to milk as a contamination after the milk is drawn, and in milk liable to such contamination is only infrequently found. If persons desiring information about their milk would correspond with the laboratory before sending specimens of this character, they could be given more accurate information regarding the milk in question.

At the request of the Western Pacific Railway, the bacteriologist inspected the water supplies used by the company in furnishing water to passenger coaches at Elko, Winnemucca, and Gerlach. This visit was for the purpose of certifying the supplies found satisfactory to the Treasury Department, as required of all railroads engaged in interstate traffic. All these supplies were certified as satisfactory.

At the request of the health officer of Virginia City, the bacteriologist spent ten days in the latter part of August and early September in Virginia City in an endeavor to determine the cause of an epidemic of dysentery of which 37 cases were investigated. The conclusion from the evidence collected was that the disease had been transmitted by an infected milk supply. A report containing the analysis of the collected evidence and the conclusions drawn, together with recommendations for the prevention of similar outbreaks in the future, was presented to the Board of Health of Storey County and to the Secretary of the State Board of Health.

Respectfully submitted,

W. B. MACK, *Director.*

ENGINEERING COLLEGE

December 31, 1914.

To the President, University of Nevada.

SIR: Herewith find my report on the work of the Engineering College for the past two years:

Attendance: There has been a steady growth in attendance as shown by the following table:

<i>School</i>	<i>1913-14</i>	<i>1914-15</i>	<i>1915, 1st Sem.</i>
Mines	29	23	30
Civil Engineering	10	10	12
Mechanical and Electrical Engineering	64	61	71
	98	99	113

The growth of the college is largely dependent upon the demand for its graduates by the industries of the State. At the present time old graduates readily find employment with reasonably good compensation. The conquest of the Nevada desert is primarily an engineering proposition and we regard an adequate supply of well-trained engineers as essential to the proper development of the state's resources. Graduates of the University are now occupying responsible positions in many of the mining, railway, and electric-power companies of Nevada.

Changes in Faculty: Mr. Geo. J. Young, Professor of Mining and Metallurgy, resigned during the summer of 1913 to accept employment elsewhere. During the year 1913-14 the position was very acceptably filled by Mr. D. B. Huntley, as Acting Professor. In July, 1914, Mr. F. C. Lincoln was appointed Professor of Mining and Metallurgy. In July, 1914, Mr. J. C. Jones, Acting Professor of Geology and Mineralogy, was made Professor of Geology and Mineralogy, succeeding Mr. W. S. T. Smith, who resigned in 1913 on account of ill-health. In November, 1914, Mr. Geo. D. Powers, Assistant Professor of Electrical Engineering, was given a leave of absence on account of ill-health. His position has been filled by the appointment of Mr. C. P. Campbell.

Courses Offered: It is our policy to specialize only on those fundamental courses which best prepare our students for the professions which they desire to follow. We do not think it advisable to offer courses in specialized branches in which a very limited number of students would be enrolled.

There have been no important changes in the curriculum during the past two years, although minor changes have been made to conform to developments in the various branches of engineering knowledge. In February, 1915, a prospector's short course will be offered for the first time. Such a course has been contemplated for a number of years by the Departments of Mining and Geology, and there now seems to be a sufficient demand to warrant its existence.

The Summer School: Summer classes in mine surveying and geology have been conducted for several years past and the results have been such as to encourage their continuation. In 1913 the classes were held in the Olinghouse district near Wadsworth. In 1914 the classes were held at the Bluestone Mine near Yerington.

Equipment: The various laboratories of the Engineering Schools are reasonably well equipped, especially in metallurgical and electrical

engineering. However, new and improved apparatus is constantly being developed and provision should be made to keep the laboratory equipment up to date and in good working condition. The purchase of an air drill testing machine is recommended for use in the laboratory of the Mackay School of Mines.

Exchange of Professors: Some of our difficulties arise from the fact that we are in an isolated community and are not in intimate contact with others of our profession. I suggest that it may be feasible to establish exchange professorships with other universities in order that our instructors and professors may have the opportunity to receive the inspiration which comes from contact with new problems and new methods of solution.

Contributions to the Technical Press: In view of the fact that they carry a heavy teaching schedule, our faculty has been very diligent in contributing results of their investigations to the technical press. Some of such contributions are as follows: "Wind Pressure on Roofs" by Professor H. P. Boardman, published in Proceedings, Western Society of Engineers; "The Geology of the Barth Iron Deposits" by Professor J. C. Jones, published in Economic Geology; "The Geology of the Lahontan Basin" by Professor J. C. Jones, published in Science; "Bolivia" by Professor F. C. Lincoln, published in Engineering and Mining Journal; "The Lampa Smelter in Peru" by Professor F. C. Lincoln, published in Mining and Scientific Press; "Electric Headlights" by Professor J. G. Scrugham, published in Railway Electrical Engineer, Journal of Electricity, Power and Gas, and others; "Treatment of Locomotive Boiler Feed Waters" by Professor J. G. Scrugham, published in Railway and Engineering Review; "The Thermal Value of Gasoline Used in Motor Car Service" by Professor J. G. Scrugham, published in Power; "The Locomobile" by Professor J. G. Scrugham, published in Journal of Electricity, Power and Gas. In addition we have contributed a very large number of illustrated articles to the technical press, descriptive of our safety conference, mine-rescue, and first-aid contests, etc. Notice of these events has been printed in nearly every technical journal in America.

Cooperative Work: For several years past the Engineering Schools have been in close touch with the industries of the State. The professors and advanced students have assisted in solving several problems connected with the design, construction, and operation of engineering propositions in Nevada. In the future it is possible that some form of cooperative work may be arranged with the U. S. Bureau of Mines, the U. S. Geological Survey, and the U. S. Bureau of Irrigation Investigations.

Needs: The principal need of the Engineering College is a hydraulic laboratory, well equipped for studying the flow of water in small pipes, flumes and ditches. Accurate information on this subject is lacking and would be of great value to the people of this State in the lay-out of irrigating systems. I trust at some early date we may see our way clear to recommend the erection of such a laboratory. There is also a great need for accurate information on types of pumping equipment best suited for irrigation pumping at varying lifts. I recommend that provision be made for such investigations during the next two years.

Another problem upon which we desire to work is the fixation of atmospheric nitrogen and the manufacture of cyanides by electrical

methods. Professor Maxwell Adams, of the Chemistry Department, has kindly offered his cooperation in the matter.

If the demand develops, it is the desire of the department to have established a course in chemical engineering. A marked opportunity in this branch has been opened in America on account of the conditions developed by the European war.

Respectfully submitted,

J. C. SCRUGHAM, *Dean*.

NORMAL SCHOOL AND COLLEGE OF EDUCATION

December 31, 1914.

To the President, University of Nevada.

SIR: The following is a report of the Normal School and College of Education for the past two years:

The Nevada State Normal School was established by Act of the Legislature in 1887 as a part of the University of Nevada and was opened in the session of 1887-88. It continued under its legal name until about 1895, when, without dropping its proper title, it was organized as the Department of Education in the University. It was sometimes also called the Junior Normal College of the University. The single and correct name was again used from 1900 to 1911. In the latter year the College of Education was established, and was declared in the register to be, in purpose, the successor of the State Normal School. After another year the name Normal School disappeared from the register, and the only recognition of the correct title since that time has been on the diplomas awarded its students. The change of name has been of at least doubtful advantage to the school. It has failed to attract the number of students it should be preparing for the schools of the State. It seems not unlikely that the change of name has kept some students away, since the aim of a college of education may not be so clear to some as the aim of a normal school. For these reasons, I am of opinion that it would be wise to return to the only name recognized by the laws of the State—the Nevada State Normal School.

In its admission requirements the College has had about the same history as colleges of arts and science in other pioneer institutions. In the earlier days the State had few high schools, and these few did not usually prepare students beyond the second or third year of present high schools. Admission requirements, therefore, were necessarily low, and the University found it necessary to do much work now done by the high schools. The first register presents a preparatory course of two years. The University Academy was established in 1895, and was renamed the University High School in 1900. From the first it had a course of three years, with some work of elementary grade in its first year. It was not until 1903 that all the work of the University High School was of high-school grade and the requirements for admission to the University were definitely fixed at twelve units. This requirement remained unchanged until 1909, when the units required were advanced to 14. A year later they were made 15, thus reaching the number required in most standard American colleges and universities. The

University High-School course was advanced to four years in 1909. The establishment of high schools in different parts of the State had already affected attendance in the University High School, and, as its numbers continued to decrease, it was felt that it was no longer needed. After seventeen years of useful service to the University and the State, it was discontinued in 1912.

In its early history the number of students in the Normal School usually outnumbered those registered in the Department of Liberal Arts. This was doubtless due to the lower requirements for admission to the Normal School and to the opportunity of carrying on studies of high-school grade. The period of rapid growth in the Normal School, as in the College of Arts and Science, began in 1894, the school having 85 students in the calendar year 1903. There was little recovery until 1906-07, when the number registered was 23. Since that time the number has been nearly stationary.

The newly founded Normal School admitted students on completion of the course of study in the elementary schools. Except for the addition of requirements in algebra and geometry, this remained unchanged until about 1900, when the requirement was fixed at two years of high-school work. After a brief return to admission from the elementary schools in 1902, the requirement was advanced to three years of high-school work in 1903 and to four years in 1911.

Because of low admission requirements in the earlier years, the students devoted most of their time to high-school work rather than to strictly professional training. Except for high-school graduates, who were usually granted about two years of advanced standing, the course was either three or four years in length, of which considerably less than one year in all consisted of professional work. On the basis of three years of high-school work for admission in 1903-09 a one-year normal course was established dominated very largely by the professional idea. This was made a two-year course, beginning with 1909, with some increase of work in professional subjects. In the organization of the College of Education in 1911, the two-year course was retained, but with a great increase in the requirements in psychology and practice teaching, and with a corresponding decrease in the study of elementary-school subjects.

Respectfully submitted,

JOHN C. WATSON,
Dean of the College of Education.

UNIVERSITY LIBRARY

December 31, 1914.

To the President, University of Nevada.

SIR: Permit me to present the report of the University Library for the two years ending December 31, 1914:

On December 31, 1912, there were 23,820 accessioned books. In 1913 we added 1,480, and in 1914 we added 1,732, making the present total 27,032.

About April 1, 1914, the books in the basement of Morrill Hall, Stewart Hall, Physics Building, and carpenter shop, were all moved into the new Library Building on the west side of the Quadrangle. Here the library has been better in every way, with more light, heat, space, and convenience.

On November 21, 1914, the Agricultural Experiment Station Library was moved into the main library building, to allow additional room for the Veterinary Department in the Hatch Station Building.

We have not kept a record of the use of the library books. The principal use is made within the building, where the books are accessible to every one. During the past eight days I have noted the number of books borrowed for home use. It was 335 books and periodicals, 8 novels, and 3 juveniles.

During the two years 70 requests for books came from persons outside of Reno. To them we have loaned 230 books and periodicals by mail or express. Travelers, each containing 50 books, have been loaned eleven times. These usually went by freight to schools of the State.

Since our collection is still small we have helped our faculty and students somewhat by borrowing from other larger libraries. We sent out 44 requests and borrowed 80 books, and were disappointed on 47 other books.

Although we had an assistant librarian only twelve and one-half months, the cataloguing of current purchases has been completed to date. But the cataloguing of the Kirchhoff collection of classical and archæological books has only begun. It was purchased in 1909.

There are also several hundred gift books, largely governmental, which are not yet accessioned and catalogued. They are accessible and many are already in use. The unbound periodicals and pamphlets are not catalogued. The contents of the periodicals are available through checked lists in the Reader's Guide and its supplements. Very little binding or rebinding has been done.

For distribution and exchange six numbers of the University of Nevada Bulletin (quarterly) have been published.

The mining library, the chemistry library, and the veterinary library are housed in their respective department buildings.

Many periodicals come as gifts to the library, the more noteworthy group of these is the list of Nevada daily and weekly newspapers, forty in all. Only two are not regularly received.

The library was open 616 days, being closed evenings, Sundays, and on the principal holidays.

In addition to the \$10,000 library building, the expenses of the library for the two years were \$14,090.28, made up of:

Salaries	\$6,060.00
Student help	988.89
Equipment	280.80
Supplies	182.16
Furniture and bookcases	694.40
Labor for moving	158.75
Other expenses of moving	218.05
Books and periodicals	5,577.78

This last item is shown separated into department divisions in the following table. It also shows the number of periodicals on the paid subscription list of each department.

COST OF BOOKS AND PERIODICALS BY DEPARTMENTS

<i>Department</i>	<i>Number of periodicals</i>	<i>Retail price of annual subscription</i>	<i>Cost of books</i>
Agriculture	17	\$89.80	\$153.75
Bacteriology and veterinary science	22	104.45	146.24
Biology	10	68.00	154.61
Botany	10	26.00	101.69
Chemistry	8	88.25	128.85
Civil engineering	11	60.00	106.72
Drawing	2	8.00	86.80
Economics and sociology	15	51.15	254.88
Education and psychology	28	78.00	246.96
English	8	81.75	383.50
Entomology	5	10.00	13.02
Geology	10	75.50	27.44
German	2	2.90	44.20
Greek (with Latin)	--	---	88.58
History and political science	9	82.50	296.00
Home economics	5	10.50	30.54
Latin	9	28.90	158.49
Law	1	5.00	36.86
Library (General)	73	860.85	268.83
Mathematics	3	19.70	56.88
Mechanical Engineering	16	58.00	107.90
Meteorology	8	11.40	18.88
Military science	1	8.00	84.76
Mining	14	64.50	197.95
Music	4	4.50	11.86
Physical culture for men	--	---	18.09
Physical culture for women	4	5.00	23.66
Physics	7	52.90	284.28
President	9	67.75	97.84
Pure food	2	4.50	19.41
Research chemistry	8	125.00	220.10
Romantic	6	34.50	116.29
Sets	--	---	280.15
Summer School	--	---	47.29
	317	\$1,456.80	\$4,190.20
Discount allowed about 5 per cent		69.09	
		\$1,387.71	

Respectfully submitted,

J. D. LAYMAN, *Librarian.*

AGRICULTURAL EXPERIMENT STATION

December 31, 1914.

To the President, University of Nevada.

SIR: I submit herewith report of the work of the Nevada Agricultural Experiment Station for the past two years:

The Nevada Experiment Station is at present supported very largely by Federal funds, the Hatch Fund and the Adams Fund, which together give a total of \$30,000 yearly. The Hatch Fund is employed in experiments which will give new information on agricultural problems. The Adams Fund is restricted by law to researches of a more fundamental character which will explain underlying laws and causes of the complex phenomena of agriculture. These funds have been supplemented by occasional appropriations from the State of Nevada.

At the present time the Nevada Agricultural Experiment Station is engaged in the study of certain problems, many of which have been under observation and study for years. The fact that a number of the members of the staff resigned in 1913 made it possible for the Nevada Station to narrow its field of work, with a view to bringing some of the present studies to a definite stage or to completion. It is, of course, impossible to take up all the problems presented by the agriculture of an entire State at any one time. There is greater danger of undertaking too many than there is of beginning too few. New problems will be taken up as the work on the older ones becomes relatively complete.

The Nevada Station has the following projects under study:

Project 1: Agronomy and Irrigation (Hatch Fund).

Irrigation in clover, alfalfa, sugar beets, potatoes, and wheat; using two inches, four inches, and six inches of water respectively at each application. With potatoes and sugar beets, clover, and alfalfa, water will be applied to different plots according to the wilting stages of the plants. With wheat different depths of application will be given at the following stages of growth: when five leaves are formed, early boot, bloom, milk, and dough, eliminating one and two periods of irrigation in the different plots; also comparing the results of two applications, using the same amount of water in each case.

Project 2: Agronomy and Irrigation (Hatch Fund).

A study of the varieties of crops grown in Nevada with a view to determine those best suited to our conditions and type of agriculture. The introduction and testing of new plants with a view to their introduction. The improvement of crops grown in Nevada through careful methods of selection.

Project 3: Research Chemistry (Adams Fund).

Alfalfa Investigations. A chemical study of alfalfa plant with a view to learn the mechanism of the fixation of atmospheric nitrogen by leguminous plants. In other words, it is aimed to study the various conditions and transformations of the element of nitrogen in its passage from the atmosphere into the more complicated organic structure of compounds of which it is an integral part.

Project 4: Poisonous Plant Investigations—Research Chemistry (Adams Fund).

A study of the toxic principles of the more common poisonous plants of Nevada.

Project 5: Economic Entomology (Adams Fund).

The Hymenopterous Parasites of the Codling Moth. A study in insectecology. A study of the life relationships existing between the codling moth (*Carpocapsa*

pomonella) and certain primary, secondary, and tertiary hymenopterous insects of parasitic habits.

Project 6: Economic Entomology (Hatch Fund).

Cut-worms infesting alfalfa fields. Studies of the life histories and habits of certain caterpillars which from time to time have been most destructively abundant in eastern and central Nevada, causing at times heavy losses to alfalfa growers. Primarily a study of means of control; a study, likewise of reasons for periods of sudden and extraordinary abundance of these insects.

Project 7: Economic Entomology (Hatch Fund).

The European Elm Scale (*Gossyparia spuria*). A study of means of control, with a view to devising a method by which the insect may be held in check without large expense and without injury to the trees, to lawns beneath them, or to the paint of fences and buildings in the vicinity of the elms.

Project 8: Meteorology and Climatology (Adams Fund).

A study of meteorological conditions at an altitude of approximately ten thousand feet, the Mount Rose Weather Observatory, with a view to determining the possibility of forecasting frost from the summits of mountains.

Project 9: Meteorology and Climatology (Adams Fund).

A study of the influence of mountains and forests upon the conservation of snow. Work is carried on largely in the Lake Tahoe Basin. The ultimate object of these studies is to determine methods of forestry by which the snow may best be conserved for the uses of agriculture, and incidentally for the most favorable development of hydro-electric power.

Project 10: Veterinary Science and Bacteriology (Adams Fund).

Equine Anemia. A study of the epidemiological, clinical, pathological, and therapeutic character of this obscure disease. An observation of the occurrence, distribution, symptoms, and morbid anatomy of an obscure and fatal disease of horses; with an experimentation for inquiry into its nature, cause, method of transmission, and of therapeutic and preventive means by which it may be treated, prevented, controlled, and eradicated.

Project 11: Veterinary Science and Bacteriology (Adams Fund).

Chicken Cholera. A study of means for the eradication and control of chicken cholera by biologic methods. A study of the production of immunity by use of suspensions of devitalized bacteria, the ultimate object being to place within the reach of poultrymen an adequate and inexpensive method by which chicken cholera may be eradicated when it makes its appearance, and by which flocks may be immunized.

Project 12: Veterinary Science and Bacteriology (Hatch Fund).

An unknown cattle disease resembling anthrax. A study of a disease not now capable of diagnosis. This disease has been observed in a portion of the intermountain regions of western America. Fundamentally a study of the nature and causation of this disorder with a view to determining methods of prevention and treatment.

In addition to these projects, studies are now in progress upon the chemical nature of certain desert plants with a view to determining their possible economic use and value.

It is very evident that the Nevada Experiment Station has at the present time an ample number of projects for study and investigation and a most interesting field for thorough work. The work upon several of these projects is relatively complete, and at an early date they will be replaced by others of importance in the intermountain region.

Necessarily the character of the things studied in any experiment station must be determined by the character of the agriculture of the State in which it is located. Stock-raising will long be the principal agricultural industry of Nevada: the geographic position of the State, its altitude,

the mountainous nature of the country, the excellence of the animal products raised, all work toward making stock-raising preeminent. For this reason it will be the policy of the Nevada Experiment Station to make most thorough and special studies of the problems which affect vitally this great industry.

The Nevada Experiment Station is supported too largely from Federal funds, which are necessarily so restricted as to make them inelastic. Because of such restrictions it is essential that the State make appropriation through the Legislature which will make the work of the Station elastic enough to render it much more efficient.

Respectfully submitted,

S. B. DOTEN, *Director.*

STATE MINING LABORATORY

December 31, 1914.

To the President, University of Nevada.

SIR: The following is a report of the work done by the Nevada State Mining Laboratory for the two years ending December 15, 1914:

We have adopted the custom of dividing our year into three periods and make summaries of the work done in each period. These periods correspond approximately to the three divisions of the college year, namely, the first and second semester and the summer vacation.

<i>Period</i>	<i>Localities heard from</i>	<i>No. persons sending samples</i>	<i>No. samples</i>	<i>Number determinations</i>
December 31, 1912, to May 15, 1913.....	104	296	545	2,292
May 15, 1913, to September 1, 1913.....	57	101	236	910
September 1, 1913, to December 15, 1913... 68		179	330	1,720
Totals, 1913.....	229	576	1,111	4,922
December 15, 1913, to May 15, 1914.....	95	338	680	2,713
May 15, 1914, to August 22, 1914.....	69	164	381	1,328
August 22, 1914, to December 15, 1914.... 84		307	640	2,492
Totals, 1914.....	248	804	1,681	6,533
Totals for two years.....	475	1,380	2,792	11,455

That there is an increasing demand for this work is shown by a comparison of the totals for these two years, with those for the year 1903-04, the first of which we have records, when 142 sent in 222 samples from 64 localities, and on which 962 determinations were made.

Respectfully submitted,

WALTER S. PALMER.

Approved: F. C. LINCOLN, *Director.*

COLLEGE OF AGRICULTURE

December 31, 1914.

To the President of the University.

SIR: The College of Agriculture has shown unusual activity during the past year. The increase in students has been over twenty per cent, the extension work under the Federal Smith-Lever Act has been established, new specialists have been added to the faculty, and several new movements and enterprises have been started. The College of Agriculture stands as a leader for the whole rural problem. It has made itself a center where men and women of the farm shall find light, inspiration, and guidance in all aspects of their struggles for a better livelihood and a broader life.

Progress Since 1909: Within the past six years rapid progress has been made in developing the agricultural resources of the State. This agricultural development has had considerable to do with the increase in rural population, and in creating a demand for scientific training in this branch of education. Until the year 1909-10 the College of Agriculture had never received an annual enrollment of more than one student. Thus, previous to this date, there was little need of a complete course of study or more adequate facilities for presenting the agricultural work. The following table shows the relative increase in faculty and students since the academic year 1908-09:

Faculty—	1908-09	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15
Professors	11	10	10	11	10	11	11
Associate Professors	—	—	—	1	—	—	2
Assistant Professors	2	2	4	6	5	3	4
Instructors	2	3	6	4	7	9	3
Total faculty	15	15	20	21	22	23	20
Students—							
Freshman	—	—	3	6	8	9	18
Sophomore	1	—	—	2	4	6	4
Junior	—	1	1	—	2	5	3
Senior	—	—	1	2	1	4	4
Special	—	—	2	16	8	11	16
Total students	1	1	7	25	23	35	45

This table shows an increase from one student in 1908-09 to forty-five in 1914-15, and the last registration of forty-five students is over 20 per cent higher than that of the previous year. During this period six new members have been added to the agricultural faculty and two new divisions, Agronomy and Dairying, have been created. The above table is a good example of the gradual increase in enrollment in the College of Agriculture. At the present time we have no building for this college. The work of the various departments is being given in the Morrill, Hatch, Stewart, and Dairy Buildings, and only in the Department of Animal Husbandry, which occupies the new dairy building, is the space and equipment adequate for properly presenting the instructional work of the department. Although our college is still in its infancy it has already gained the reputation of sending out men well trained in agricultural lines. The majority of our graduates are either making a success of farming, or holding good positions in fields of advanced work.

Dairy Short Course: The College of Agriculture offers a one- or two-year short course in dairying, lasting five weeks each year. The object of this course is to give to the farm boys a thorough training in the manufacture of butter and cheese, and in the production of sanitary market milk. This academic year the work will be given from January 6 to February 13, 1915. The dairy industry is rapidly gaining a stronghold in many agricultural districts of the State, and there will soon be a great demand for men well trained in this branch of work.

Farmers' Week: In connection with this short course a Farmers' Course is held for one week each year. During this week the farmers of the State and their wives meet at the University to discuss the important problems of the farm and home. The next Farmers' Week is being planned for the period of February 2 to 6, 1915. The time will be devoted chiefly to demonstrations by the various departments, talks and discussions by the farmers, and addresses by specialists on the most important problems of the State. The farm women will take up the preparation of foods, the various phases of household management, and plans for social betterment in the rural districts.

The Agricultural Club: In 1909 the agricultural students organized an Agricultural Club for the better study of agricultural conditions and requirements of the State. Under its management and supervision the members have increased their knowledge along the various agricultural lines. By the labors and examples of the members of the club, students have been taught to enter with greater zeal and earnestness into the solution of problems confronting the agricultural communities of the country. The club is planning to assist in entertaining the farmers and their wives during the "Farmers' Week."

Agricultural Extension: This work was established in Nevada July 1, 1914, by the passage of the Smith-Lever Act creating a federal fund for extension work in Agriculture and Home Economics. The aim of our Extension Division is to carry agricultural information direct to the farmer and help to put it into practice. The demonstration work of this division has been explained to over one thousand and fifty farmers and their wives. Meetings were held in Lahontan, Carson, Elko, Humboldt, Mason, and Truckee Valleys. This division has also received over five hundred and fifty inquiries from the farmers on the modern methods of farm practice, and detailed information has been given promptly in every instance.

Miss Norma J. Davis has been employed as extension worker in home economics, to assist the farm women in solving the important problems of the home. Her present plan is to give demonstrations at the rural schools and farm women's clubs on the selection, preservation, preparation, and serving of food, the improvement of sanitary conditions in and about the country dwelling, and the general arrangement of household articles of use and adornment to improve the conditions of rural homes. In October, November, and December the following twenty-five communities in the northern part of the State were visited: Fernley, Lovelock, and upper valley of Lovelock, Winnemucca, Grass Valley, near Winnemucca, Golconda, Battle Mountain, Elko, Lamoille, Lee (South Fork), Hylton (Skelton), Deeth, Starr

Valley near Deeth, Wells, Tobar, Metropolis, Clover Valley, and Ruby Valley south of Wells, Ely, East Ely, McGill, Northam, and Reno.

The subjects discussed at the various meetings were as follows:

Extension Plans.

Power of Diet and Good Cooking, or the Factors Involved in Planning a Meal.

Principles of Cooking Different Classes of Food.

House Plans and Home Decoration.

Girls' Home Economics Clubs have been organized in twenty-six communities. The total membership of these clubs up to the present date is 318 girls between the ages of 10 and 20 years. The girls' clubs have received the first lesson which is on soup making. These lessons are prepared by the Department of Home Economics and in most cases are demonstrated and carefully explained before the work of the clubs is started. When the lesson is completed each member is furnished with a list of questions to be answered and returned to the University to be carefully examined and graded by the Home Economics Department. Five ladies' Home Economics Clubs have been organized in Lee, Starr Valley, Wells, Metropolis, and Ruby Valley. One thousand two hundred and fourteen ladies and girls have been told of the extension work. The largest attendance at any meeting held has been 65, and the average attendance 28. All who have been told of the extension work have shown a great deal of interest and enthusiasm, besides a readiness to cooperate with the University of Nevada in establishing this work in the rural districts.

Specialists from various departments in the College of Agriculture have given several demonstrations to the farmers of the State.

The Department of Agronomy has confined the extension work to the relation of soils and irrigation, to crop production, the importance of selected seed for maximum yields of farm crops, methods of conserving soil moisture for dry-farming areas, and the marketing of farm products. Nine meetings were held in different rural districts with a total attendance of over nine hundred. The Department of Animal Husbandry has given demonstrations on the selection of steers, and cows for the feed lot, the selection of breeding animals both for beef and various animal products, the testing of dairy animals, and the value of cow-testing associations. By request, F. W. Wilson, in charge of the Department of Animal Husbandry, has visited six districts and talked to over eight hundred and fifty farmers and their boys.

Dr. W. B. Mack, in charge of the Departments of Bacteriology and Veterinary Science, has visited Wells, in Elko County, and Winnemucca, in Humboldt County. At these two meetings he has explained in detail to over one hundred and twenty-five livestock men the extension work which has been planned for the treatment of the important diseases among the various breeds of live stock.

George G. Schweis, of the Department of Entomology, has carried on demonstration work on the methods of combating insects injurious to field and orchard crops, diseases of bees, the management of an apiary, and the modern methods of marketing the products of the apiary. The demonstration work on farm-crop pests was conducted in Truckee, Mason, and Lahontan Valleys. Three apiaries in Smith

Valley, five in Mason Valley, and one in Lahontan Valley were used in connection with the demonstration work on bees and their diseases.

On the first of January, 1915, V. E. Scott will be placed in the field as an extension worker in dairying. Mr. Scott has been in charge of the dairy work at the University for the past two years, and will be of great assistance to the dairymen of the State in helping them to place their business on a more profitable basis. On the same date Dr. Stephen Lockett, a well-trained specialist on animal diseases, will be placed in the field to give instruction and demonstrations of methods for control of hog cholera, on the tuberculin test, treatment of affected cows, means of wiping diseases from dairy communities, and the control of anthrax, black-leg, etc. It is expected that the introduction of this work will prevent the loss of large numbers of live stock each year which are now dying of some cause unknown to the stockmen.

Men in other departments are available for demonstration work in other branches of agriculture, but it is necessary that their trips be planned for the week-end so that the instructional work in the college will not be hindered.

Recommendations and Special Needs: The greatest need of the College of Agriculture is an agricultural building, or an educational home for our boys and girls who come to the University for advanced training in Agriculture and Home Economics. Only a small percentage of the boys and girls of the rural districts find it possible to come to the University and take the four-year course in Agriculture or Home Economics. We are therefore preparing a two-year special course in each of these subjects. These courses will run from four to six months each year, and will accommodate the larger class of young people on the farms. The only requirement for entrance to these courses will be that the girl or boy is 16 years of age. These courses will not cover the more technical phases of agriculture, but will treat chiefly on the practical application of agriculture to the farm and home. If we expect to keep our boys and girls who desire higher education in agriculture, in Nevada, we should have a suitable agricultural building for housing the necessary facilities and equipment for giving proper instruction in agricultural subjects. The future of Nevada depends largely upon the development of its agricultural resources. In what way can these resources be more rapidly developed than by sending back to the rural communities boys and girls thoroughly trained in the modern methods of farm practice and household management?

For the past two years some of our classes have been so crowded for space that several agricultural students have not been permitted to enter the courses according to the regular schedule. With the steady increase in registration in the College of Agriculture the need will be still greater for a well-equipped agricultural building for the proper housing of the various branches of instruction.

The College Farm: After the College of Agriculture is equipped with a building for housing its departments, it will be very desirable to increase the acreage of the college farm in order that we may keep and house the live stock on our own grounds, and avoid paying the high rental that we are now obliged to pay for housing our stock at the present time.

Respectfully submitted, CHAS. S. KNIGHT,
Dean of the College of Agriculture.

FOOD AND DRUGS AND WEIGHTS AND MEASURES

December 31, 1914.

To the President, University of Nevada.

SIR: Following is a summary of the work of the Departments of Food and Drugs and Weights and Measures for the period ending December 31, 1914.

FOOD AND DRUGS

During the past two years this department has conducted the work outlined in the last report, and taken up inspections along other lines as time and circumstances would permit. Careful attention has been given to the food supply found in our local markets, and series of samples of food and drug products collected in every part of the State have been submitted to the laboratory for analysis. In addition to the official samples taken by representatives of the department in the field, a large number have been submitted by residents of the State, requesting some special determination, or to ascertain if certain products, which they contemplated placing upon the market, would meet the requirements of the State Food and Drug Law. During the period covered by the last report, complete inspection, covering the whole State, in certain lines of food products was made, and the results of such inspections and analyses published in tabulated form. The purchase price of samples and laboratory work incidental to such investigations runs into money, and to curtail expenses, keeping within our appropriation, it was necessary to abandon work of so wide a nature, and to pay particular attention to the market as a whole, taking only those samples deemed necessary. A survey of the market and results obtained on the 1,190 official samples analyzed shows a decided improvement in conditions over inspections previously made, and that the large majority of goods sold in this State at the present time are in conformity with the law, and meet our requirements in respect to quality and labeling.

A considerable amount of work has been carried on in establishing tolerances on various products shipped into the State, as well as for those manufactured locally. Products that are not placed in air-tight containers will lose in weight quite rapidly when shipped to this State owing to a difference in climatic conditions between the point of manufacture and delivery, the humidity being comparatively low in this State. On account of this difference in climatic conditions it has been necessary for us to undertake experiments for the purpose of establishing tolerances, or, in other words, the amount we should allow from the stated weight on the package for shrinkage due to evaporation of the moisture content. The Nevada law, as originally enacted, contained no provision requiring that the net contents be stated in terms of weight, measure, or numerical count upon the label or the container, but such an amendment, both to the National law and to the Nevada law, has been enacted, and became effective in September, 1914. Without exception we find that food products being shipped to this State at the present time meet the labeling requirements. A circular relating to this amendment to the law has been issued and sent to parties interested throughout the State.

Other circulars issued during the year relate to care of milk in the home, labeling requirements for drug products, the guaranty clause, and the labeling of vinegar. One bulletin, Station Bulletin No. 80, containing the full text of the Food and Drug and Weights and Measures Laws, together with all the rules and regulations issued by the department relating thereto, has been issued for general distribution.

Following the custom established three years ago, the department has made educational exhibits at the State Fair in Reno, also the Truckee-Carson Fair at Fallon, during the fair session of the past two years. Each year new features have been introduced in the exhibits, showing some particular phase of food manufacture and the preparation of certain drug products. During the fair sessions in the fall of 1913 we carried on a demonstration of the canning industry, and through the courtesy of the California Cannery Association we were enabled to present all manners of food products prepared by them, also to have a demonstrator who was familiar with every point of the canning processes, constantly in attendance. The demonstration proved of great interest to the many visitors. At the fairs in session during the months of September and October last past, more stress was given to drugs and the preparations manufactured from raw materials received from all parts of the world.

During the past few months, attention has been given to the sanitary inspection of places where food products are manufactured or offered for sale. This is an entirely new feature in our work and is the first attempt along this line in the State. A marked improvement in methods and equipment has been noted since the inauguration of sanitary inspection, but much remains yet to be completed to bring general conditions to a satisfactory standing. A uniform score system has been adopted which embraces an examination of all parts of any building or place where food products are manufactured or offered for sale. Seventy-one restaurants throughout the State have been scored; 210 dairy inspections have been reported, and eight miscellaneous food manufacturing establishments visited. Seventy-six hearings for violations of the Food Law have been conducted during the past year as provided for in section 19. Several cases have been instituted against outside manufacturers shipping short-weight butter into the State. Proceedings have been brought against the butter itself, the dealer notified of the action taken, and advised the date the case would be opened in court. This was done in order to afford the manufacturer a chance to show cause why the butter should not be confiscated, since it was offered for sale in violation of the state law. On the date set for the hearing, if the party responsible for the short weight failed to appear, the butter was ordered confiscated by the court, and either destroyed or turned over to some state institution. Such proceedings have brought butter offered for sale upon the market up to standard, not only in quality, but in quantity, and the results of inspections made a few weeks ago showed the situation to be much improved, as in only one instance was short-weight butter found.

On several occasions the department has been called upon to investigate certain matters for the State Board of Pharmacy and assist in the prosecution of violations of the same, particularly in the traffic of illicit drugs.

Local inspectors were appointed in the cities of Tonopah, Goldfield, Elko, Ely, and Las Vegas the first part of the year, with instructions to look after conditions in their respective districts, and collect such samples for the department as designated from time to time. Many important matters have been attended to by the local inspectors. A detailed account of the investigations conducted by them will be given in my annual report.

WEIGHTS AND MEASURES

During the past two years the work of this department has been carried on in connection with the Food and Drugs field inspections, and along the same general lines as during the year previous, when the law became effective. The equipment of the department is in first-class condition, standard throughout, and but very little is needed at the present time to continue the work.

The only recommendation I have to make in this connection is the purchase of two additional sets of 50-pound weights, one set to be centrally located in the eastern part of the State and one set at Tonopah or Goldfield. The law requires that weighing devices shall be inspected for residents of the State upon request without any charge to the parties making the request. The transportation of 1,000 pounds of test weights from one part of the State to another for heavy inspection work has given us considerable trouble. The cost would be prohibitive to ship the test weights by express or as excess baggage. Frequently the department is called upon to inspect a stock scale in one section of the State when the test weights are several hundred miles away, and the transportation by freight is slow, causing a serious loss in time, especially when it is urgent that the test be made without delay.

During the past year 564 weighing devices have been inspected. This inspection has been state-wide in scope, and a great improvement has been noted over conditions that existed on the first tour made by representatives of the department. The number of scales found necessary to condemn outright has been very few as compared with the first year of work along this line. In addition to the examination of scales found in retail establishments, a large number of large platform scales have been tested upon request of the owners. During the past few months gaging of oil-delivery wagons and automatic measuring devices has been inaugurated, and work along these lines is well warranted as indicated by the results already obtained. A detailed report covering the work of both departments is now in the hands of the printer, and will soon be ready for distribution.

Respectfully submitted,

SANFORD C. DINSMORE,
Commissioner.

COMPTROLLER'S REPORT

February 10, 1915.

A. W. HENDRICK, *President, University of Nevada.*

MY DEAR SIR: Herewith find financial statements of the University of Nevada for the years 1913 and 1914 as per following schedules:

- A—Receipts and Disbursements—90,000-Acre Interest Account.
- B—Receipts and Disbursements—University Contingent Fund.
- C—Receipts and Disbursements—University State Tax Fund.
- D—Receipts and Disbursements—General Support.
- E—Receipts and Disbursements—Regents' Fund.
- F—Recapitulation of above statements, being a total of all University maintenance funds provided by the State of Nevada.
- G—Analysis of salaries paid from state funds.
- H—Analysis of improvements and repairs by buildings.
- I—Analysis of improvements and repairs by expenditures.
- J—Appropriations for library and dairy buildings.
- K—Statement of A. & M. Fund for fiscal year ending June 30, 1913.
- L—Statement of A. & M. Fund for fiscal year ending June 30, 1914.
- M—Statement of Hatch and Adams Funds for fiscal year ending June 30, 1913.
- N—Statement of Hatch and Adams Funds for fiscal year ending June 30, 1914.
- O—Statement of disbursements from state appropriation for support of Experiment Station.
- P—State appropriation for State Analytical Laboratory.
- Q—State appropriation for State Hygienic Laboratory.
- R—State appropriation for Food and Drugs.
- S—State appropriation for Weights and Measures.
- T—State appropriation for moving mineral cabinets.
- U—State appropriation for Summer School.

Following these statements of expenditures for 1913 and 1914 will be found estimates for 1915 and 1916, as follows:

Schedule V (see pages 83-84) is an estimate of the cost of general maintenance and instruction in those departments supported by state tax. All items in this schedule are based on statistics from the Comptroller's office on the expenses of the past four years.

In general expense, Schedule V (page 83), Item 3 includes power used in the heating plant running the electric pumps.

Item 11 includes \$3,750 for books for the Library.

Item 21 includes the most necessary repairs required, viz:

- (a) The bridge at the entrance to the grounds will require rebuilding within a year.
- (b) The Orr ditch must be repaired between the dam and the entrance road.
- (c) In the heating plant two new burners must be installed, and, in addition, considerable repair work is necessary.
- (d) None of the Campus roofs, except the Mackay School of Mines, have been painted for four years. Several are leaking badly, and the roofs of Morrill Hall and the Hatch building require replacement.

Schedule W is an estimate of the public-service division of the University for 1915-16. This division consists of the following departments:

1. State Veterinary Control.....	\$12,000.00
2. State Hygienic Laboratory.....	10,000.00
3. Food and Drug Control, Weights and Measures.....	14,000.00
4. State Analytical Laboratory.....	5,000.00
5. Soils Laboratory.....	2,000.00
6. Support of Experiment Station.....	2,000.00
7. Engineering Research.....	5,000.00
8. Extension Division.....	4,687.00

Estimates of these various departments are attached hereto. These estimates are based wherever possible on statistics of the past years.

Respectfully submitted,

C. H. GORMAN, *Comptroller*.

SCHEDULE A

Receipts and Disbursements—90,000-Acre Grant Interest Account, 1913-1914

RECEIPTS	
January 1, 1913—Balance	\$674.84
Interest on land contracts	2,024.49
Transfer from Contingent Fund	223.70
Interest—Massachusetts 3's	1,408.00
Interest—Massachusetts 3½'s	3,150.00
Interest—Nevada 4's	795.00
Interest—Nevada 5's	2,518.75
	<u>\$10,794.78</u>
DISBURSEMENTS	
Regular salaries	\$5,427.29
Student labor	489.86
Insurance	992.50
Library	1,066.69
Equipment	1,144.67
Supplies	137.76
Traveling expenses	13.15
Stationery	176.95
Telegraph and postage	73.86
Printing	166.75
Electric light	502.50
Water	87.50
Gas	169.00
Advertising	75.40
December 31, 1914—Balance	266.40
	<u>\$10,794.78</u>

SCHEDULE B

Receipts and Disbursements—University Contingent Fund, 1913-1914

RECEIPTS	
January 1, 1913—Balance.....	\$12,757.60
Interest on land contracts.....	1,108.48
Massachusetts 3% bonds.....	1,108.00
Massachusetts 3½% bonds.....	980.00
Nevada 4% bonds.....	28.35
Nevada 5% bonds.....	1,033.35
	<u>\$17,010.78</u>
DISBURSEMENTS	
Salaries.....	\$4,928.12
Student labor.....	461.40
Equipment.....	164.34
Sundry supplies.....	501.38
Insurance.....	331.90
Traveling expenses.....	539.47
Postage, stationery, telephone, and telegraph.....	453.94
Improvements and repairs.....	1,750.02
Electric light.....	1,200.95
Water.....	181.25
Gas.....	309.20
Printing and advertising.....	338.19
Fuel—Oil.....	2,496.58
Wood and coal.....	428.00
Freight and express.....	338.72
Regents' traveling expenses.....	652.75
Stable.....	327.12
Lectures.....	343.50
Library.....	269.23
Furniture and fixtures.....	305.70
Miscellaneous.....	79.95
Trees, shrubbery, etc.....	181.67
90,000-Acre transfer.....	223.70
	<u>16,750.08</u>
December 31, 1914—Balance.....	\$260.70

SCHEDULE C

Receipts and Disbursements—University State Tax Fund, 1913-1914

RECEIPTS

January, 1913—Balance on hand	\$26,178.47	
June, 1913	20,318.77	
Total 1912 taxes (Rate, 5 cents)		\$46,492.24
November, 1913	\$37,280.77	
Elko County, 1913	8,560.48	
June, 1914	37,729.15	
Total, 1913 taxes (Rate, 8 cents)		83,570.40
Esmeralda County, 1911		2,426.65
Total		\$132,489.29

DISBURSEMENTS

Salaries	\$38,633.42	
Students	9,511.79	
Equipment	696.69	
General supplies	1,221.95	
Industrial insurance	980.71	
Library	2,973.22	
Improvements and repairs	11,696.50	
Furniture and fixtures	2,238.99	
Printing and advertising	1,647.50	
Stable	648.86	
Postage and stationery	241.10	
Light	1,487.20	
Water	437.50	
Gas	563.45	
Fuel—Oil	5,136.10	
Coal and wood	1,163.00	
Insurance	2,081.60	
Traveling expenses	136.20	
Freight and express	86.05	
Telegraph and telephone	297.27	
Trees, fertilizer, shrubbery	121.70	
Miscellaneous and contingent	420.00	
December 31, 1914—Balance on hand	68.49	
		\$132,489.29

REPORT OF UNIVERSITY OF NEVADA

SCHEDULE D

Statement of Expenditures from Appropriation for General
Support of the University, 1913-1914

Appropriation, 1913-1914 \$30,500.00

	<i>Expenditures</i>	
Salaries	\$4,727.33	
Student labor	629.17	
Insurance	1,008.52	
Library books	2,545.50	
Equipment	855.17	
General supplies	926.63	
Furniture and fixtures	2,804.15	
Telegraph and telephone	245.80	
Trees, shrubbery, fertilizer	698.53	
Traveling expenses	707.80	
Stationery and postage	658.10	
Improvements and repairs	11,319.58	
Advertising and printing	815.44	
Freight and express	114.27	
Contingent	417.90	
Stable	680.72	
Electric light	601.15	
Gas	246.90	
Water	306.25	
Wood and coal	216.00	
		<u>\$30,500.00</u>

SCHEDULE E

Statement of Expenditures—Regents' Fund, 1913-1914

Appropriation, 1913-1914 \$4,000.00

	<i>Expenditures</i>	
Salaries	\$2,518.25	
Campus improvement	697.25	
Audit	800.00	
Glee Club	28.17	
Contingent	161.00	
Printing and advertising	295.15	
December 31, 1914—Balance unexpended .....	.18	
		<u>\$4,000.00</u>

SCHEDULE F

Recapitulation

	Contingent University Fund	90,000- Acre Grant	University state tax	Appropriation general support	Regents' Fund	Total
Salaries.....	\$4,928.12	\$5,427.29	\$38,633.42	\$4,727.88	\$2,518.25	\$106,232.46
Student labor.....	461.40	489.86	9,511.79	629.17	-----	11,091.72
Equipment.....	164.34	1,144.67	666.69	855.17	-----	2,860.87
Sundry supplies.....	501.38	125.12	1,221.95	926.68	-----	2,775.13
Insurance.....	331.90	992.50	2,081.60	1,008.52	-----	4,414.52
Traveling expenses.....	539.47	18.15	25.15	485.60	-----	1,068.37
Postage, stationery, telephone, telegraph.....	453.94	250.81	588.37	898.90	-----	2,142.02
Improvements and repairs.....	1,750.02	-----	11,696.50	11,319.58	697.25	25,463.35
Electric light.....	1,200.95	502.50	1,487.20	601.15	-----	3,791.80
Water.....	131.25	87.50	437.50	306.25	-----	962.50
Gas.....	309.20	169.00	563.45	246.90	-----	1,288.55
Printing and advertising.....	338.19	242.15	1,647.50	815.44	295.15	3,338.43
Fuel—Oil.....	2,496.58	-----	5,136.10	-----	-----	7,632.68
Wood and coal.....	423.00	-----	1,163.00	216.00	-----	1,802.00
Freight and express.....	338.72	-----	86.05	114.27	-----	539.04
Regents' traveling expenses.....	652.75	-----	111.05	222.20	-----	986.00
Stable.....	327.12	-----	648.86	660.72	-----	1,636.70
Lectures.....	343.50	-----	-----	163.15	-----	506.65
Library.....	289.23	1,066.69	2,973.22	2,545.50	-----	6,864.64
Furniture and fixtures.....	305.70	-----	2,238.99	2,804.15	-----	5,348.84
Miscellaneous.....	79.95	-----	420.00	254.75	189.17	943.87
Trees, shrubbery, etc.....	181.67	12.64	121.70	696.52	-----	1,014.53
90,000-Acre transfer.....	223.70	-----	-----	-----	-----	223.70
Industrial insurance.....	-----	-----	960.71	-----	-----	960.71
Audit.....	-----	-----	-----	-----	300.00	300.00
Totals.....	\$16,750.08	\$10,528.38	\$132,420.80	\$30,500.00	\$3,999.82	\$194,199.08

SCHEDULE G

Analysis of Salaries, 1913-1914

Department	1913	1914	Totals
Administration.....	\$10,920.24	\$10,234.97	\$21,155.21
Buildings and grounds.....	8,712.70	9,469.10	18,181.80
Manzanita Hall.....	1,162.00	1,134.00	2,296.00
Lincoln Hall.....	1,913.30	2,060.00	3,973.30
Hospital.....	382.50	514.50	897.00
Clerical.....	1,136.86	2,188.12	3,324.98
Janitor.....	1,030.00	1,377.50	2,407.50
Latin and Greek.....	4,950.00	4,650.00	9,600.00
Art.....	1,520.80	250.00	1,770.80
Education.....	4,686.00	5,628.98	10,314.98
History.....	2,800.00	3,750.00	6,550.00
Library.....	2,750.00	3,800.00	6,050.00
Library students.....	475.34	460.03	935.37
Military science.....	528.10	1,498.96	2,027.06
Modern languages.....	3,400.00	3,750.00	7,150.00
Music.....	520.00	1,450.00	1,970.00
Physical education, women.....	1,500.00	1,500.00	3,000.00
Physical education, men.....	800.00	1,400.00	2,000.00
Student labor.....	2,713.42	4,538.36	7,251.78
Student, miscellaneous.....	308.75	674.02	977.77
Improvements and repairs.....	3,466.25	562.13	4,028.38
Summer School Civil Engineering.....	100.00	-----	100.00
Farm labor.....	-----	1,261.25	1,261.25
Chemistry.....	-----	200.00	200.00
Totals.....	\$55,671.26	\$61,752.92	\$117,324.18

SCHEDULE H

Analysis of Improvements and Repairs, 1913-1914

	<i>State tax</i>	<i>General support</i>	<i>Contingent fund</i>	<i>Regents' fund</i>	<i>Totals</i>
Lincoln Hall	\$129.27	\$3,187.77	\$10.25	-----	\$3,327.29
Greenhouse	-----	44.80	-----	-----	44.80
Heating-plant building	-----	88.65	-----	-----	88.65
Stewart Hall	296.25	1,638.93	11.15	-----	2,146.35
Grounds	1,987.15	1,100.08	228.00	\$697.25	4,012.48
Manzanita Hall	48.65	285.55	-----	-----	334.20
Dining Hall	-----	309.63	-----	-----	309.63
Gymnasium	243.10	1,224.08	-----	-----	1,467.18
Morrill Hall	292.00	1,653.79	259.10	-----	2,204.89
Library	1,728.14	144.05	-----	-----	1,872.19
Chemistry	227.35	80.00	-----	-----	257.35
Hatch Station	213.00	110.00	-----	-----	323.00
Dairy Building	2,466.46	-----	-----	-----	2,466.46
Mechanics Building	81.00	-----	-----	-----	81.00
Mackay Building	75.00	-----	-----	-----	75.00
General repairs	248.45	-----	1,228.02	-----	1,471.47
Salaries	2,726.08	1,802.30	-----	-----	4,028.38
Hospital	-----	-----	18.50	-----	18.50
General supplies	984.60	-----	-----	-----	984.60
Totals	\$11,696.50	\$11,819.58	\$1,750.02	\$697.25	\$25,463.35

SCHEDULE I

Analysis of Improvements and Repairs, 1913-1914

	<i>State tax</i>	<i>General support</i>	<i>Contingent fund</i>	<i>Regents' fund</i>	<i>Totals</i>
Wiring	\$714.47	\$821.66	\$111.00	-----	\$1,647.13
Plumbing	896.65	2,401.25	-----	-----	3,297.90
Cement walks, retaining walls, etc.	53.00	887.33	-----	-----	940.33
Repair to roof	75.00	70.00	-----	-----	145.00
Plaster	405.50	678.75	188.00	-----	1,272.25
Paper and paint	548.75	2,063.29	-----	-----	2,612.04
Cement floors	585.00	-----	-----	-----	585.00
Partitions, brickwork, etc.	1,091.80	1,600.80	-----	-----	2,692.60
Trees, soil, etc.	1,984.15	237.75	288.00	\$697.25	3,097.15
Heating-plant additions	1,472.50	574.50	-----	-----	2,047.00
Salaries	2,726.08	1,802.30	-----	-----	4,028.38
General supplies and repairs	984.60	-----	1,228.02	-----	2,157.62
Earthquake damage	269.00	-----	-----	-----	269.00
Furniture and fixtures	-----	824.40	-----	-----	824.40
Moving old buildings	-----	110.00	-----	-----	110.00
Fences, etc.	-----	267.55	-----	-----	267.55
Totals	\$11,696.50	\$11,819.58	\$1,750.02	\$697.25	\$25,463.35

SCHEDULE J**Statement of Expenditures from Appropriation for Library
Building, 1913-1914**

Appropriation, 1913-1914.....\$10,000.00

<i>Expenditures</i>	
Contractor	\$8,948.68
Architect	400.00
Foundation	651.32
	<u>\$10,000.00</u>

**Statement of Expenditures from Appropriation for Dairy
Building, 1913-1914**

Appropriation, 1913-1914.....\$4,800.00

<i>Expenditures</i>	
Contractor	\$4,560.00
Architect	192.00
Equipment	58.00
	<u>\$4,800.00</u>

SCHEDULE K**A Statement of the Agricultural Mechanical College as Rendered
to the Commissioner of Education for the Fiscal Year
ending June 30, 1913**

Balance on hand July 1, 1912.....Nothing

Date of receipt of installment for 1912-13, July 19, 1912.....\$50,000.00

Total available for year ending June 30, 1913.....\$50,000.00

Disbursements thereof for and during the year ending June 30, 1913:

Agriculture, as per Schedule A	\$6,400.19
Mechanic Arts, as per Schedule B	14,406.96
English Language, as per Schedule C	4,363.82
Mathematical Science, as per Schedule D	3,359.64
Natural or Physical Science, as per Schedule E	13,720.77
Economic Science, as per Schedule F	4,530.72
Training of Teachers of Elementary Agriculture and Mechanic Arts, as per Schedule G	0.00

Total expended during year.....46,782.10

Balance remaining unexpended July 1, 1913.....\$8,217.90

SCHEDULE L**A Statement of the Agricultural Mechanical College as Rendered
to the Commissioner of Education for the Fiscal Year
ending June 30, 1914**

Balance on hand July 1, 1913.....\$8,217.90

Date of receipt of installment for 1913-14, July 19, 1913.....50,000.00

Total available for year ending June 30, 1914.....\$58,217.90

Disbursements thereof for and during the year ending June 30, 1914:

Agriculture, as per Schedule A	\$11,337.78
Mechanic Arts, as per Schedule B	13,940.76
English Language, as per Schedule C	5,972.76
Mathematical Science, as per Schedule D	3,051.66
Natural or Physical Science, as per Schedule E	14,581.55
Economic Science, as per Schedule F	4,333.39
Training of Teachers of Elementary Agriculture and Mechanic Arts, as per Schedule G	0.00

Total expended during year.....\$58,217.90

Balance remaining unexpended July 1, 1914.....\$0.00

SCHEDULE M

Nevada Agricultural Experiment Station in Account with the United State Appropriations, 1912-1913

<i>Dr.</i>		<i>Hatch Fund</i>	<i>Adams Fund</i>
To balance from appropriations for 1911-1912.....		\$0.00	\$0.00
Receipts from the Treasurer of the United States, as per appropriations for fiscal year ended June 30, 1913, under Acts of Congress approved March 2, 1887 (Hatch Fund), and March 16, 1906 (Adams Fund).....		\$15,000.00	\$15,000.00
<i>Cr.</i>		<i>Abstract</i>	
By salaries.....	1.....	\$8,459.27	\$12,791.40
Labor.....	2.....	3,312.20	313.45
Publications.....	3.....	20.00	-----
Postage and stationery.....	4.....	396.64	29.5
Freight and express.....	5.....	196.11	71.02
Heat, light, water, and power.....	6.....	117.05	124.50
Chemicals and laboratory supplies.....	7.....	304.89	191.77
Seeds, plants, and sundry supplies.....	8.....	336.99	185.93
Fertilizers.....	9.....	-----	-----
Feeding stuffs.....	10.....	180.38	262.10
Library.....	11.....	.54	10.71
Tools, machinery, and appliances.....	12.....	232.53	32.00
Furniture and fixtures.....	13.....	343.95	70.00
Scientific apparatus and specimens.....	14.....	199.50	261.10
Live stock.....	15.....	139.00	3.50
Traveling expenses.....	16.....	496.80	646.94
Contingent expenses.....	17.....	-----	25.00
Buildings and land.....	18.....	209.10	41.05
Balance.....		0.00	0.00
Totals.....		\$15,000.00	\$15,000.00

SCHEDULE N

Nevada Agricultural Experiment Station in Account with the United States Appropriations, 1913-1914

<i>Dr.</i>		<i>Hatch Fund</i>	<i>Adams Fund</i>
To balance from appropriations for 1912-1913.....		\$725.00	\$1,483.30
Receipts from the Treasurer of the United States, as per appropriations for fiscal year ended June 30, 1914, under Acts of Congress approved March 2, 1887 (Hatch Fund), and March 16, 1906 (Adams Fund).....		14,275.00	13,516.70
<i>Cr.</i>		<i>Abstract</i>	
By salaries.....	1.....	\$6,819.47	\$10,918.00
Labor.....	2.....	3,102.45	35.45
Publications.....	3.....	223.91	-----
Postage and stationery.....	4.....	334.08	68.60
Freight and express.....	5.....	351.68	109.09
Heat, light, water, and power.....	6.....	62.00	61.65
Chemicals and laboratory supplies.....	7.....	232.93	611.43
Seeds, plants, and sundry supplies.....	8.....	634.13	155.34
Fertilizers.....	9.....	-----	-----
Feeding stuffs.....	10.....	25.00	183.35
Library.....	11.....	347.16	110.18
Tools, machinery, and appliances.....	12.....	737.32	107.39
Furniture and fixtures.....	13.....	1,359.60	90.00
Scientific apparatus and specimens.....	14.....	358.19	2,343.87
Live stock.....	15.....	8.50	1.00
Traveling expenses.....	16.....	175.53	204.60
Contingent expenses.....	17.....	20.00	-----
Buildings and land.....	18.....	658.10	-----
Balance.....		0.00	0.00
Totals.....		\$15,000.00	\$15,000.00

SCHEDULE O**Statement of Expenditures of State Appropriation for Support of
Nevada Agricultural Experiment Station, 1913-1914**

Appropriation, 1913-1914 \$5,000.00

Apportioned to Mt. Rose Department \$3,273.60

<i>Expenditures</i>	
Salaries	\$3,200.00
Assistants	59.50
Sundry supplies	6.80
Scientific apparatus	7.50
	<u>\$3,273.60</u>

Apportioned to Experiment Station \$1,726.40

<i>Expenditures</i>	
Labor	\$59.00
Furniture and fixtures	261.50
Scientific apparatus	65.30
Tools, machinery, and apparatus	38.75
Live stock	209.30
Traveling expenses	56.80
Buildings and land	775.75
Feeding stuffs	165.77
Sundry supplies	51.16
Water rent	10.00
Freight and express	26.35
Postage	6.92
	<u>\$1,726.40</u>

SCHEDULE P**Statement of Expenditures in State Analytical
Laboratory, 1913-1914**

Appropriation, 1913-1914 \$4,100.00

<i>Expenditures</i>	
Salaries	\$3,066.64
Student assistants	516.91
Equipment	181.87
Supplies	373.38
Stationery	6.20
Freight and express	5.20
	<u>\$4,100.00</u>

SCHEDULE Q**Statement of Expenditures in State Hygienic
Laboratory, 1913-1914**

Appropriation, 1913-1914 \$10,000.00

<i>Expenditures</i>	
Regular salaries	\$6,699.98
Student assistants	1,108.95
Scientific apparatus	306.65
Laboratory supplies	302.98
Other supplies	97.64
Furniture and fixtures	103.75
Traveling expenses	148.11
Gas, ice, etc.	206.78
Telephone and telegraph	56.90
Postage, stationery, and printing	115.75
Freight and express	80.81
Rabbits, etc.	83.50
Library books	163.75
Repairs	25.00
	<u>\$10,000.00</u>

SCHEDULE R**Statement of Expenditures in Department of Food and Drugs
Control, 1913-1914**

Appropriation, 1913-1914.....\$10,000.00

<i>Expenditures</i>	
Salaries	\$7,896.86
Apparatus	214.25
Chemicals and supplies	542.20
Traveling expenses	870.00
Gas and ice	136.53
Telephone and telegraph	49.45
Stationery and postage	72.00
Freight and express	51.16
Samples	19.95
Repairs and miscellaneous	125.65
Library books	21.91
December 31, 1914—Balance .....	.04
	<u>\$10,000.00</u>

SCHEDULE S**Statement of Expenditures in Department of Weights and
Measures, 1913-1914**

Appropriation, 1913-1914.....\$4,000.00

<i>Expenditures</i>	
Salaries	\$2,464.33
Traveling expenses of inspectors	915.31
Laboratory equipment	60.00
Postage	30.00
Telephone	2.00
Freight and express	68.91
Sundry supplies	13.00
December 31, 1914—Balance	446.45
	<u>\$4,000.00</u>

SCHEDULE T**Statement of Fund for Moving Cabinets**

Balance on hand January 1, 1913.....\$21.91

<i>Expenditures</i>	
February 26, 1914—Freight on cabinet to Reno	\$21.91
	<u>\$21.91</u>

SCHEDULE U**Statement of Expenditures from Appropriation for Summer School,
1913 and 1914**

Appropriation, 1913-1914.....\$2,000.00

<i>Expenditures</i>	
Salaries	\$1,992.50
Incidentals	7.50
	<u>\$2,000.00</u>

SCHEDULE V
Estimates, 1915-1916

GENERAL EXPENSE	
1. Fuel—Oil	\$4,000.00
2. Wood and coal	900.00
3. Electric light and power	2,000.00
4. Water	525.00
5. Gas	650.00
6. Insurance	2,600.00
7. Industrial insurance	1,000.00
8. Stable	250.00
9. Freight and express	200.00
10. Furniture and fixtures	500.00
11. Equipment	8,750.00
12. Regents' traveling expenses	1,000.00
13. Traveling expenses—Miscellaneous	1,000.00
14. Postage	500.00
15. Stationery	500.00
16. Trees, shrubbery, etc.	500.00
17. Printing and advertising	750.00
18. Telephone and telegraph	600.00
19. Sundry supplies	1,000.00
20. Contingent	1,000.00
21. Improvements and repairs to buildings and grounds	10,000.00
	\$38,125.00
ADMINISTRATION	
President	\$5,000.00
Vice-President	1,800.00
Deans (3)	1,800.00
Registrar	1,200.00
Comptroller	1,800.00
	12,600.00
CLERICAL	
Secretary Board of Regents	\$300.00
Secretary President	1,200.00
Clerk	1,200.00
Stenographer	300.00
	3,000.00
BUILDINGS AND GROUNDS	
Superintendent	\$1,800.00
Greenhouse	900.00
Repairs and plumbing	2,160.00
Night watchman	900.00
Heating-plant and labor	2,180.00
Labor	2,500.00
Head janitor	1,200.00
Student janitors	4,500.00
Master Lincoln Hall	1,500.00
Manzanita Hall	1,000.00
Housekeeper Lincoln Hall	600.00
	19,220.00
INSTRUCTION SALARIES	
Latin and Greek, 2 professors	\$4,800.00
Education	4,200.00
History	2,400.00
Library	2,400.00
Student assistants	380.00
Modern Languages	2,400.00
German	1,500.00
Music	1,500.00
Physical Training, for Men	1,200.00
Physical Training, for Women	1,500.00
Political Science	2,000.00
Art	900.00
Military Science	1,200.00
Cadet Officers	300.00
	26,680.00

For recapitulation of this table, see next page (page 84).

REPORT OF UNIVERSITY OF NEVADA

RECAPITULATION OF SCHEDULE V

Administration salaries	\$12,600.00	
Clerical salaries	3,000.00	
Buildings and grounds	19,220.00	
Instruction salaries	26,660.00	
		\$61,480.00
General expense		88,125.00
Total, 1915		\$99,605.00
1916		99,605.00
Plus 10% on general expense, 1915		8,812.00
Total, 1915 and 1916		\$208,022.00

SCHEDULE W

Estimates of the Public-Service Division of the University, 1915-1916

1. STATE VETERINARY CONTROL—

Laboratory Assistant	\$3,600.00	
Veterinarian's salary	4,000.00	
Labor	1,200.00	
Office Assistant	1,200.00	
Traveling expenses	600.00	
Chemicals, etc.	300.00	
Glassware, etc.	300.00	
Animals	400.00	
Telephone and telegraph	300.00	
Postage, stationery, etc.	100.00	
		\$12,000.00

2. STATE HYGIENIC LABORATORY—

Salaries—		
Director	\$1,200.00	
Bacteriologist	4,800.00	
		\$6,000.00
Labor	1,200.00	
Scientific apparatus, consisting of Autoclav, \$325; Low-Temperature Incubator, \$100; High-Temperature Incubator, \$200	625.00	
Furniture and fixtures	400.00	
Laboratory supplies, chemicals, etc.	700.00	
Traveling expenses	170.00	
Gas, ice, etc.	200.00	
Telephone and telegraph	80.00	
Postage, stationery, printing	250.00	
Rabbits, guinea pigs, etc.	75.00	
Freight and express	75.00	
Books and periodicals	125.00	
Incidentals supplies, including laundry	100.00	
		10,000.00
Carried forward		\$22,000.00

SCHEDULE W—Continued

Brought forward.....		\$22,000.00
3. FOODS AND DRUGS, AND WEIGHTS AND MEASURES—		
Salaries—		
Commissioner	\$4,800.00	
Laboratory Assistant	2,400.00	
		\$7,200.00
Field inspection service, both departments		3,600.00
Student help in laboratory		200.00
Traveling expense		1,100.00
Equipment and apparatus—		
Portable balance	\$75.00	
40 heavy weights at \$4	180.00	
Dies, seals, and blanks	25.00	
Immersion refractometer	90.00	
Ether extraction apparatus	50.00	
Distillation apparatus	20.00	
Thermometers	15.00	
Laboratory glassware	250.00	
Chemicals for laboratory	210.00	
Filter paper	10.00	
Water baths	15.00	
Graduated cylinders	15.00	
Pipettes	10.00	
Graduated flasks	5.00	
Miscellaneous	50.00	
		1,000.00
Gas and ice		100.00
Stationery and postage		100.00
Samples		200.00
Repairs and miscellaneous		100.00
Telephone and telegraph		100.00
Freight and express		250.00
Books		50.00
		14,000.00
4. STATE ANALYTICAL LABORATORY—		
Salary of analyst	\$4,000.00	
Chemicals, laboratory supplies	1,000.00	
		5,000.00
5. SOILS LABORATORY—		
Part salary of chemist		2,000.00
6. SUPPORT OF EXPERIMENT STATION		
This fund is needed to supplement the Federal Funds appropriated for the support of the Agricultural Experiment Station.		
		2,000.00
7. ENGINEERING EXPERIMENTATION		
This fund is for the conduct of experimentation on the farms of the State in electric pumping, etc.		
		5,000.00
8. EXTENSION DIVISION		
The sum of \$14,587 is appropriated to the State of Nevada by the Federal Government for Agricultural Extension work on condition that the State appropriate the sum of \$4,587 for the years 1915 and 1916 for this work.		
		4,587.00
GRAND TOTAL, Public-Service Division		\$54,587.00



SIXTH ANNUAL REPORT
OF THE
RAILROAD COMMISSION
AND
THIRD ANNUAL REPORT
OF THE
PUBLIC SERVICE COMMISSION

1913

H. F. BARTINE - - - - - **Chief Commissioner**
J. F. SHAUGHNESSY - **First Associate Commissioner**
W. H. SIMMONS - **Second Associate Commissioner**
E. H. WALKER - - - - - **Secretary**
W. K. FREUDENBERGER - - - - **Chief Engineer**



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : : **JOE FARNSWORTH, SUPERINTENDENT**
1914



SIXTH ANNUAL REPORT

OFFICE OF THE RAILROAD COMMISSION OF NEVADA,
CARSON CITY, NEVADA, March 20, 1914.

HON. T. L. ODDIE, *Governor of Nevada.*

DEAR SIR: The Railroad Commission of Nevada submits this, its sixth annual report, covering the work of the Commission for the calendar year ending on the 31st day of December, 1913. There has been considerable delay in getting this report into print. This has been partly due to press of work in the Commission office, and partly to the fact that the State Printing Office itself has been considerably crowded. Since the close of the year 1913 some very important cases have been disposed of, and, in order that the public may be informed with respect to those cases, they will be referred to in this report, even though their final disposition was of a date later than the calendar year 1913, which this report is primarily intended to cover.

IMPORTANT CASES DISPOSED OF

At the close of 1913 there were three cases pending in the United States District Court for Nevada, in which cases this Commission was the party defendant. Two of these—namely, Nos. 76 and 139—were suits brought by the Southern Pacific Company and the Tonopah and Goldfield Railroad Company to enjoin certain orders made by the Commission reducing freight rates upon the lines of the two companies named within the State of Nevada. Case 76 was a distinctively main-line case, affecting rates upon the main Central Pacific line only. Case 139 affected rates between Reno and Tonopah and Goldfield and involved a portion of the Central Pacific main line, the Nevada and California line, from Hazen to Mina, and the Tonopah and Goldfield road from Mina to Goldfield.

The cases named had been pending a long time in the Federal Court, and the orders of the Commission had been restrained. This delay was due largely to the fact that questions were involved that were under consideration by the Supreme Court of the United States in what are known as the Minnesota Rate Cases. The defendant companies had raised two questions: First, that the rates as prescribed were confiscatory, and, second, that the order fixing the rates was an interference with interstate commerce, and, consequently, violative of the Constitution of the United States.

When the Minnesota cases were decided in 1913 the Supreme Court of the United States rejected the long-established methods and principles of apportionment and calculation adopted by the railroads involved in those cases. The methods and principles passed upon in the Minnesota Rate Cases were identical with those employed by the Southern Pacific and Tonopah and Goldfield companies. As a result, those companies which were contesting the orders of this Commission in the United States District Court were left with no ground to stand upon, as far as the question of confiscation was concerned, because they were not prepared to present any new method of arithmetical calculation.

The question of interference with interstate commerce by the legislation of the State and the orders of the State Commission was also exhaustively considered and discussed by the Supreme Court in the Minnesota cases. Upon this point, the contentions of the railroads were rejected as intrinsically unsound. Thus it will be seen that in passing upon the Minnesota cases the Supreme Court of the United States practically decided in favor of this Commission in all of the freight-rate cases pending in the Federal Court for this district involving the validity of orders which the Commission has made.

In this way it came to pass that the Southern Pacific Company found itself with no legal ground to stand upon in the prosecution of its cases against the Commission. Therefore, early in June, 1913, the officials of that company requested the Commission to reopen those cases for further consideration, to the end that a readjustment of rates might be made somewhat in line with those prescribed by the Commission's orders. Accordingly, formal hearings were had, and, waiving all technical objections, the Southern Pacific Company proposed a schedule of distance rates better even, as a whole, for the Nevada shippers than those which had been prescribed by the previous orders. These rates were accepted by the Commission and were promptly put into effect. The result has been, as shown by the specific reference to these cases later in this report, a direct saving of \$30,000 a year to the shipping public of Nevada.

GRATIFYING RESULTS ATTAINED

The disposition of these cases is in the highest degree gratifying, not only because of the money-saving effected, but because of the legal questions involved that may be regarded as settled in the State of Nevada. The question of confiscation was not so important in itself, because, if the Commission made an order reducing rates to a confiscatory point and the order were declared invalid on that account, there would have been nothing to prevent the making of another order more conservative and free from the same objection. Had it been held, though, that an order made by the State Commission and applying only to intrastate traffic was unconstitutional by reason of some assumed interference with interstate commerce, it would, to a very great extent, have crippled the Commission in its work. In fact, so far as rate-making is concerned, it would have deprived the Commission of nearly all its power; because almost every local rate must in some way, directly or indirectly, affect through rates. It can readily be understood, therefore, that the Minnesota rate decisions have been a source of great satisfaction to this Commission. That satisfaction is heightened considerably by the fact that the views of the Supreme Court of the United States expressed in those decisions are almost identical with the contentions made by this Commission in the trial of the cases referred to in the United States District Court for this State.

We are still left without any fixed and settled rule of apportionment of business and valuation of railroad property. We do know, however, that the methods and contentions of the railroads upon these points have been rejected as unsound by the highest judicial tribunal in the country. But the question of interference with interstate commerce by the making of an order applying solely to local traffic is definitely settled. We now know that the Commission has full power to fix reasonable intrastate

rates, even though such fixing may incidentally affect commerce between the States.

RESERVED POWERS OF STATES RECOGNIZED

This should be gratifying to all who desire to see the reserved power of the States fully maintained and recognized. It appears strange that such an issue should have been presented by the great common carriers of the country.

The Constitution seems to be perfectly clear upon this point. It provides that the National Government shall have full power over commerce with foreign nations, with Indian tribes, and among the several States. By a well-known rule of statutory construction, the naming of these three classes of commerce as being under the jurisdiction of the National Congress excludes all other kinds. If a State has not control of its local commerce, it is difficult to see what reserved rights of the State might not be utterly destroyed. The fact that there may be an overlapping and an affecting of interstate commerce by state regulation of its local traffic furnishes no reason whatever for the complete ignoring of the power of the States. It is peculiar to our dual form of government that there should be conflicts and interference here and there, but, as already intimated, this furnishes no argument for a change in the form of our government. It was assumed by Judge Sanborn that wherever there was a conflict or interference the national power must necessarily control. Such views have not been accepted as sound by this Commission. As we look upon it, the reserved powers of the State are just as sacred and should be just as carefully guarded as the expressly granted powers of the National Government. So far as interstate and intrastate commerce are concerned, this view has been accepted by the Supreme Court of the United States.

OTHER CASES SETTLED

Several other cases of greater or lesser importance that were pending at the close of our last annual report have been settled, and others have been decided, although formal orders and opinions have not yet been promulgated. Speaking generally, these cases have been disposed of in conformity with the Commission's view, and without contest.

NEW CASES

During the year 1913 some fifty-five new cases were taken up by the Commission. Some of them were formal and some informal. A detailed history of these cases follows later in this report. Many of them have been decided, and all that are of consequence are well under way for final decision.

THE PASSENGER FARE CASE

It is proper to note that since the close of the year 1913, and within the last few months, Case No. 155, which is known as the Southern Pacific Passenger Fare Case, has been disposed of. Those who read the Commission's last annual report must have observed that in this case the Commission was divided, the Chief Commissioner filing a dissenting opinion. Briefly stated, the order provided that the 4-cent passenger fare upon the main line of the Central Pacific should be reduced to 3 cents, and that the 5-cent fare upon the Nevada and California as far south as the broad-gage portion extended—namely, to Mina—should also

be reduced to 3 cents. The simple statement that the Chief Commissioner dissented, unexplained, might convey the impression that he was opposed to making any reduction. This is not the fact. He strongly favored a 3-cent fare on the main line. His objections to the order were three: First, that is was not in line with the issue that was presented to the railroad company at the hearing. The company was requested to direct its testimony to showing why the 4-cent fare on the main line should not be reduced to 3 cents, and why the 5-cent fare on the branch line should not be reduced to 4 cents. In other words, the company was requested to consider the proposition of reducing the fare 1 cent per mile on each line, whereas the order provided for a reduction of 2 cents per passenger per mile on a part of the branch line. The second objection urged by the Chief Commissioner was that, in reaching its conclusion and making its order, the majority of the Commission had used a large amount of statistical data that was never introduced in evidence and which the railroad company had not been afforded an opportunity to meet. The third was that, under the circumstances and conditions prevailing in this State, and with respect to the defendant company's lines, it was improper to couple the main line and the broad-gage portion of the branch line together, treat them as one, and apply the same rate on both—in short, that traffic conditions did not justify a 3-cent fare on the branch line.

Upon motion for an injunction *pendente lite*, the United States District Court held that the order as made was void for the first two reasons above stated. Whether the two roads could be properly united and treated as one for the purpose of establishing a uniform fare on both was a fact that could only be determined in court by the evidence, and the Court, having found that the order was void for the first two reasons, it was not necessary for it to pass specifically upon the third point of objection.

The order having been held void, manifestly it was impossible to enforce it, and consequently on the 2d day of February, 1914, the Commission, by formal resolution revoked, vacated, and set aside the order, and authorized the Attorney-General to take such steps as might be necessary to close out the case in the Federal Court. So far as this Commission is concerned, the case is now disposed of and the way is cleared for such further action as it may be deemed proper to take with respect to the subject of passenger fares upon the lines of the Southern Pacific Company within the State of Nevada.

THE FOURTH-SECTION CASES

It is to be regretted that the Supreme Court of the United States still withholds its decision in what are known as the Fourth-Section Cases. This is especially regrettable in Nevada for the reason that the Fourth-Section orders referred to put an end for a time, and for a considerable time, to any further proceeding in what is known as the Reno Case. The Reno Case is by far the most important one that this Commission has ever had. For the benefit of those who have not read our earlier annual reports, a brief statement of that case will be given here:

RENO CASE EXPLAINED

For many years the custom had been in vogue by the Southern Pacific Company of charging upon west-bound freight delivered at Nevada points the same rate as if the freight had been carried through to Sacramento and then brought back to the Nevada point of destination. The effect

may be illustrated by a statement of the first-class rates. The through rate from Chicago to Sacramento was \$3 per hundred. The local rate back from Sacramento to Reno was \$1.29; from Sacramento to Winnemucca, \$1.60; from Sacramento to Elko and other points east to the state line of Utah, \$1.72½. Consequently the rate from Chicago to Reno was \$3 plus \$1.29, or \$4.29; to Winnemucca it was \$3 (the Sacramento rate) plus \$1.60, or \$4.60; while to Elko the rate was \$3 (the Sacramento rate) plus \$1.72½, or \$4.72½. Thus it appears that for the shorter haul to Nevada points a very much higher charge was made than for the longer haul to Sacramento; it further appears that even in Nevada the shorter the haul the higher was the charge.

After the first full presentation of the Reno Case, the Interstate Commerce Commission made an order covering the case in part. The order dealt with class rates alone, leaving commodity rates for future consideration. By that order the first-class rate from Chicago to Reno was fixed at \$2.90, giving Reno an advantage of 10 cents over Sacramento. From the Buffalo-Pittsburg line the first-class rate was fixed at \$3.20, which placed Reno at a disadvantage of 20 cents compared with Sacramento; from New York the rate was fixed at \$3.50, which gave Sacramento an advantage of 50 cents over Reno. The order made slightly lower rates from eastern points to Winnemucca and places east of that town within the State of Nevada. This was a substantial victory, but it fell a long way short of giving to the people of Nevada what they and this Commission believe to be just rates. So far as the class rates were concerned, it left very little to complain of. It is estimated that at least 75 per cent of all our west-bound freight over the line of the Central Pacific Railway comes from Chicago territory and points west. Of the remaining 25 per cent, at least one-half comes from points no farther east than Buffalo and Pittsburg, leaving only from 10 to 12 per cent coming from the Atlantic seaboard. It had been shown by the investigation of Professor Thurtell, a former member of this Commission, that the average differential against Nevada upon all west-bound freight was about 73 per cent. It will, therefore, be seen at a glance that the changes made in class rates resulted in a most substantial advantage to the people of this State. The changes were of such character that class goods could no longer be taken through to Sacramento and then returned to Nevada and sold at lower prices than the Nevada dealer could make after paying his higher freight charges.

But, perhaps, 80 or 85 per cent of all west-bound freight brought from eastern points into Nevada came under commodity rates which for the time remained untouched. Upon these commodities the differentials in favor of the coast terminals were about as great as, and in some cases greater than, in the cases of class rate goods.

THE LONG AND SHORT HAUL

While the final determination of the Interstate Commerce Commission respecting commodity rates was still pending, Congress passed an Act amending the Interstate Commerce law. The most particular and most important change was made in what is known as the long-and-short-haul clause of the fourth section. Prior to the amendment, that portion of the section read that no higher charge should be made for a shorter than for a longer haul over the same line in the same direction, the shorter being included within the longer, under substantially similar

circumstances and conditions. By the amendment the words "under substantially similar circumstances and conditions" were eliminated.

This Commission was not able to see how or wherein the striking out of those words made any particular difference in the meaning of the section, because it still provided that, in special cases, after investigation, the Interstate Commerce Commission might relieve the carrier from that provision, the same as in the original section. The railroads, however, assumed that it did, and all of the great trunk lines reaching the Pacific Coast, with their immediate eastern connections, very promptly applied to the Interstate Commerce Commission for authorization to charge less for longer than for shorter distances, alleging that the circumstances and conditions were such as to make the cases special and to justify the Commission in granting their application. In effect, the application was for permission to maintain existing rates.

After most elaborate hearings the Interstate Commerce Commission made two orders of the same tenor and effect, but applying to different roads. What were known as the Reno, Phoenix and Spokane Cases were, in a way and for a time, merged in these fourth-section orders. In brief, they provided that from the Missouri River territory charges into the intermountain region should be no higher than charges for freight of the same kind to the coast terminals; that from Chicago territory charges to the intermountain region should not exceed those to the coast terminals by more than 7 per cent; that from the Buffalo-Pittsburg line the differential should not be more than 15 per cent against the intermountain region; and from New York the difference should be not greater than 25 per cent.

ACTION OF COMMERCE COURT

The effect of these orders relating to the carriage of freight of all kinds would have been much the same as the effect of the previous order fixing class rates, and would have been a very long stride in the direction of giving to the intermountain region the relief which it was demanding. But, while the orders did make concessions to the carriers, allowing them to charge somewhat higher rates from Chicago, Pittsburg, and New York into the intermountain region than for the longer haul to the coast terminals, the railroads petitioning were not satisfied, and took the case before the Commerce Court, which was then in existence. That court held the orders to be beyond the power of the Interstate Commerce Commission, in that they did not undertake to establish reasonable rates, but merely a ratio of rates, and consequently void. From the decisions of the Commerce Court, the Interstate Commerce Commission aided by the law department of the United States Government, appealed the cases to the Supreme Court of the United States, where they have been held without decision ever since—a period of something like a year and a half.

DELAY IN SUPREME COURT

The cause of this long delay is, of course, not known to the public or to the members of this Commission. After having been fully argued and presented to the Supreme Court, a new Justice, Mr. Justice Pitney, was appointed to fill a vacancy in that court. A little later the case was reopened for further argument, the general understanding being that it was done in order that Mr. Justice Pitney might be fully advised with respect to the character of the case. But even this took place something like a year ago, and we are still without a decision. The

natural conclusion is that the court must be very evenly divided and is holding the case in abeyance for the purpose of reconciling differences and rendering a decision by the court with as little division as possible. But what concerns us most is that the pendency of this case has completely tied the hands of this Commission with respect to the Reno Case. We cannot, under present conditions, carry that case farther. In saying this there is no purpose to convey the idea that the matter is ended. If the Interstate Commerce Commission is sustained in its fourth-section orders it will, as has been heretofore stated, give to our people a measure of relief so substantial that it may be accepted as a settlement of the question for some time to come. Should those orders be held invalid, then the Reno Case proper can be again taken up and pressed to a final decision.

CONCESSIONS BY THE RAILROADS

Meanwhile it should be remarked that the railroads themselves have, during the period of the pendency of these Fourth-Section Cases, made substantial reductions in rates upon a large number of commodities moving westward into Nevada, which reductions have heretofore been estimated to amount to approximately \$50,000 a year. With the final settlement of the Reno Case, whether upon the basis of the fourth-section orders as already made by the Interstate Commission or by special order in the Reno Case itself, this Commission has estimated that the saving to the people of the State of Nevada in the matter of freight charges will be in the neighborhood of \$500,000 a year, over and above all the reductions heretofore named. But this means a great deal more to the State in a business way than the mere amount saved in freight charges. Obviously, excessive and discriminatory charges for the transportation of freight retard the progress of any State or community subjected to such charges and discrimination. It is not possible to figure out in dollars and cents what the ultimate effect will be upon business conditions in Nevada of the establishment of freight rates which will relieve the State from the disadvantage under which it has labored by reason of the discriminatory charges to which it has been subjected for so many long years. We only know that the effect must be very marked and highly advantageous.

AN OPTIMISTIC VIEW

At this point it seems fitting for the Commission to give expression to the optimistic view that the day of the State's deliverance is not very far in the future. While the Reno Case has not, up to the present time, been entirely successful, it is in a large measure conceded, not only by the Interstate Commerce Commission, but by the leading railroad officials in the country, that in the manner of its make-up and presentation the Reno Case is unique among all the great cases presented for the consideration of the Interstate Commerce Commission. Scarcely an attempt has been made by those in control of the railroads concerned seriously to question the soundness of the argumentation or the conclusive effect of the mathematical calculations which characterized the Reno Case in its preparation and presentation. In fact, some very prominent railroad officials have conceded, privately, that the Reno Case will ultimately, and that in the comparatively near future, revolutionize the whole system of rate-making for west-bound traffic from eastern territory into the intermountain region by the practical elimination of what has been termed the "back-haul charge." This naturally may be, and it is believed will be, hastened by

the completion of the Panama Canal. The effect of this will be to place the Atlantic seaboard into closer touch by water with the Pacific Coast cities, and deprive the great transcontinental railroads of a portion of that traffic unless it be retained by a very considerable lowering of rates, which, in its nature, would make that part of the railroads' traffic less profitable than it is at the present time. As a result, the great transcontinental carriers will be obliged to seek new fields of operation. It will become more and more to their interest to build up the intermountain territory, to fill it with people and develop its resources along every business line. This is admitted by railroad officials of high standing, and it presages much that is good for the future of Nevada.

REDUCTIONS AND SAVINGS

In its last annual report the Commission presented, with the nearest possible approach to accuracy, figures showing the amount of reductions in freight rates and passenger fares that had been effected up to that time; also the expense of maintaining this Commission compared with the savings effected, and also compared with the expense of maintaining similar commissions in other States. These figures are readily obtainable, and it is not deemed necessary to repeat them here further than to make the general statement that the aggregate of the savings effected amounted to \$665,000 per annum, and that the expense of the Nevada Commission, notwithstanding that this is a State of high prices, was very much less than the expense of maintaining any other railroad commission in the United States. It is not to be supposed, nor is it within the limits of possibility, that the Commission can continue reducing railroad charges in the same ratio as in the past for an indefinite period of time. A point is necessarily reached at which the reductions must cease, because every public service corporation is entitled to reasonable returns upon its investment, all circumstances and conditions considered. If we pursue a course which denies to these corporations the right and the opportunity to make reasonable profits, it is as certain as anything in business affairs can be that it will give a substantial check to the investment of money in such enterprises and retard the progress of the State. Still, there is always an opportunity for the readjustment of rates, the removal of discriminations and a gradual bringing down of the rate schedules. Fully recognizing the right of every railroad to live, it is a significant circumstance that during the entire period of its existence this Commission has authorized but a single increase of rates, which was upon brick from Reno to Wabuska. The reason for this was that the rate had been fixed from Reno at an unreasonably low figure for the sole purpose of building up the brick industry at that point.

This alone would not have induced the Commission to authorize a raising of the rate. But, it so happened that a brick industry had been established at Carson City, from which point to Wabuska rates were very much higher than from Reno. It was impossible for this Commission to order the brick rate from Carson City to Wabuska to be reduced to a level with the Reno rate, consequently equality was secured by bringing about a very large reduction in the rate from Carson City and, at the same time, authorizing a small increase in the rate from Reno, thus bringing the rates to a parity with each other and placing the brick industry at the two points upon an equal footing.

EFFECT IN SPECIAL CASES

While it is not always easy or even possible to figure the exact saving made by the readjustment of rates upon particular classes of goods or commodities, it is still evident that where the changes are all in the line of reductions, every change carries with it a saving to the shippers, and a consequent saving to the entire community. In the aggregate these savings mount into large figures. It has already been shown that the adjustment of Cases 76 and 139 with the Southern Pacific Company and the Tonopah and Goldfield Railroad has resulted in a saving of \$30,000 a year, which is several thousand dollars more than the annual expenses of maintaining both the Railroad and the Public Service Commissions.

THE FRUIT AND VEGETABLE CASE

A striking illustration of the value of such commissions as this is found in the action taken with respect to Case 250. This is a case involving a matter of which this Commission has no direct jurisdiction. The subject covered is the classification of fruits and vegetables from California points into Nevada, Arizona, and other States. By a change of classification—that is to say, by taking these commodities out of lower classes and putting them into higher classes—the rates were very considerably increased. In his scrutiny of the tariff schedules, as they were regularly filed with the Commission, Secretary Walker discovered these proposed increases and brought them to the attention of the Commission. As a result, an earnest protest was entered by the Commission against the proposed changes. The details of the case are given later on in the résumé of cases, and it is not necessary to touch upon the matter further in this portion of the report than to call attention to the fact that the proposed changes, if made, will result in an increase of \$20,000 a year in the charges which our people will be required to pay in freight upon fruits and vegetables. Strange to say, no business house or private individual had made any note of the proposed change. The protest was purely the work of this Commission, which intervened upon its own initiative and furnished the data showing the injustice of the reclassification and its injurious effect in this State. The case was well made up and strongly presented to the Interstate Commerce Commission, and it is believed that the reclassification will be condemned by that body. This case alone, which hardly attracted the attention of the business interests of Nevada, actually involves a change in freight rates exceeding the total cost of maintaining the Railroad Commission.

WORK OF THE SECRETARY

In this connection it is only a just recognition to call attention to the high efficiency and the fidelity of the Secretary of this Commission, Mr. E. H. Walker, who has occupied that position from its original organization. His work has been at all times arduous, and it is constantly increasing in volume with the multiplication of cases and the additional duties devolved upon him by the creation of the Public Service Commission. This work is of a character calling for the closest attention and a high order of ability. Particular attention may be directed to the fact that, in the fruit and vegetable case just mentioned, not only did Secretary Walker detect the change and perceive its effect upon Nevada, but he prepared in full the testimony upon the basis of which this Commis-

sion was enabled to make the strong showing which it did on behalf of Nevada's interests before the representative of the Interstate Commerce Commission at the hearing held in the city of Sacramento. It is simple justice to say that the character of the work that he is performing calls for a higher salary than the Secretary of this Commission is receiving. It is believed that, in view of the intrinsic worth of his services, his salary should be substantially increased.

INCREASING WORK OF COMMISSION

The last two annual reports of this Commission covered, in a general way, the details of the Commission's work so fully that it is not necessary to extend this portion of the report farther along the lines of detailed statement as to what it has done. What has been here said, coupled with the detailed statement of the various cases that have been considered by the Commission during the last year, is sufficient to bring us abreast of the situation as it is now. The Commission cannot, however, refrain from calling attention to the fact that its work is constantly increasing, although, speaking generally, the railroad cases are not of as great magnitude as those with which the Commission has had to deal in earlier years. It should be borne in mind that the members of the Railroad Commission have been made *ex officio* Public Service Commissioners, and the work of that Commission has assumed very large proportions, some of the cases being of great magnitude and importance, involving the members of this Commission in an immense amount of labor. The details of the work of the Public Service Commission will be given in a separate report to be filed contemporaneously with this one, and it is not necessary, nor would it be proper, for the Commission to take up these matters in detail in this report.

THE STATE PRINTING OFFICE

The Commission does not feel that it would be just to fail to make mention of the splendid service that has been rendered by the State Printing Office in the publication of official documents and records pertaining to the work of both the Railroad and Public Service Commissions. That work has been done with remarkable accuracy, its typographical character is of the very best, and it has been done in a spirit of cheerful, friendly cooperation that is most highly appreciated by the members of this Commission.

An itemized statement of the expenses of the Commission is given later in an appropriate place in this report.

ABOLITION OF THE COMMERCE COURT

The Commission cannot refrain from expressing its pleasure at the action of Congress which in effect abolished the Commerce Court. The opposition of this Commission to that court has been freely expressed, both publicly and privately. It petitioned Congress strongly for the enactment of a law that would bring the career of that altogether unnecessary court to an end. The motive which led to the creation of the court was, perhaps, commendable. The trouble seems to have lain very largely with its personnel. Besides, as stated in an earlier report by this Commission, the Commerce Court, having no jurisdiction except over interstate commerce cases, was naturally brought into antagonism to that Commission. In order to justify its own existence it had to

take issue with the Interstate Commerce Commission wherever it was possible to do so, even though the opposition were based upon purely technical grounds. It stands to reason that a body constituted, as the Interstate Commerce Commission is, of five first-class lawyers and two high-class experts will generally be right in its decision of railroad cases. If the Commerce Court simply confirmed the action of the Interstate Commerce Commission, it proved the uselessness of the court. It is a very significant circumstance that of twenty-seven cases decided by the Interstate Commerce Commission and contested in the Commerce Court, twenty-three were decided against the Commission, and of the remaining four in which the Commission was sustained, only one was of great importance. It is with a feeling of extreme relief that this Commission has witnessed the departure from the field of judicial activity of that most unfortunate of judicial creations, the late Commerce Court. If the efforts of this Commission contributed even in small degree to that end, the members feel like congratulating themselves.

IMPORTANT WORK AHEAD

At this time there is important work ahead for the coming year. The Commission cherishes the hope that in the near future the Supreme Court of the United States will render a decision in the Fourth-Section Cases. Whether that decision upholds the validity of those orders or otherwise, it will be welcomed by all interested in the great questions at stake. As hereinbefore stated, if the decision be favorable to the orders named it will, for a time, settle the questions at issue; if unfavorable, it will untie the hands of this Commission and enable it to make another move for final results in the Reno Case itself. Other matters of importance are still pending and still others are to be taken up soon, but it would not be proper to mention specifically in this report what those cases are.

We now reach a point at which it is proper to give a detailed résumé of the specific cases with which the Commission dealt in 1913, and to some extent during the present year:

STATUS OF CASES REFERRED TO IN FORMER REPORTS WHICH WERE STILL PENDING BEFORE THE COMMISSION OR THE COURTS AT THE CLOSE OF THE YEAR 1912

Cases Nos. 76 and 139—Class Freight Rates on the Southern Pacific Company's Main Line and Nevada and California Railway Branch.

Cases 76 and 139, entitled *Railroad Commission of Nevada v. Southern Pacific Company*; and *Nevada Hardware and Supply Company, et al., v. Southern Pacific Company and Tonopah and Goldfield Railroad Company*, respectively, were pending before the United States District Court of Nevada at the close of the year 1912, the Commission's original orders having been entered on March 1, 1910, in the first-named case, and on June 17, 1911, in the second case. These orders prescribed certain reductions in the intrastate freight class rates between main-line points of the Southern Pacific Company in Nevada, and between Reno, Nevada, and points on the Nevada and California Railway branch and Tonopah and Goldfield Railroad Company's line.

On request of the Southern Pacific Company these cases were opened for rehearing during the year 1913, such rehearing taking place before the Commission on June 5, 1913, at Carson City. Appearances for the

Southern Pacific Company were: C. W. Durbrow, Attorney; G. W. Luce, General Freight Agent; and J. M. Fulton, Assistant General Freight Agent. Testimony was taken at this hearing, and the case resubmitted to the Commission for decision.

On June 18, 1913, the Commission entered its opinion and order in the case on rehearing, which reads as follows:

[Cases Nos. 76 and 139]

BEFORE THE RAILROAD COMMISSION OF NEVADA

RAILROAD COMMISSION OF NEVADA, *Complainant*,

v.

SOUTHERN PACIFIC COMPANY, *Respondent*.

Hearing held at Carson City, Nevada, June 5, 1913.

Decision rendered June 18, 1913.

Appearances:

C. W. Durbrow, Attorney;

G. W. Luce, General Freight Agent;

J. M. Fulton, Assistant General Freight Agent;

Of the Southern Pacific Company, Respondent.

The Railroad Commission of Nevada, *in pro per*.

OPINION AND ORDER

By the Commission:

This proceeding was begun upon the Commission's own initiative, and was a reconsideration of the issues involved in Case No. 76, of the Railroad Commission of Nevada v. Southern Pacific Company, and Nevada and California Railway Company, and the Nevada Hardware and Supply Company, *et al.*, v. Southern Pacific Company, and Tonopah and Goldfield Railroad Company, No. 139, in so far as the Southern Pacific Company is concerned. It was agreed at the hearing that no question would be raised by respondent as to the form of the proceeding or time allowances as prescribed by law, and that the hearing should be held upon the date of the appearance of the respondent, to wit: June 5, 1913. It was further stipulated and agreed by respondent that the testimony in the two cases named above, given before the Commission, and also taken in the United States District Court of Nevada, upon the trial of said cases therein, upon complaint brought by the respondent herein, and the Tonopah and Goldfield Railroad Company might be considered and used as a part of the record in this case, the same as if it had been formally presented and introduced at this hearing.

The case, having been fully presented upon its merits, was taken under advisement by the Commission.

After full consideration of the testimony the Commission is of the opinion that the present schedule of intrastate freight rates upon the main line of the Central Pacific Railroad in Nevada, and also upon that portion of the respondent company's lines extending from Reno via Hazen to Fallon, Mina, and other points south of Mina, to the California line, is excessive and unreasonable.

It is also the judgment of the Commission that the rates heretofore prescribed in the cases of the Nevada Railroad Commission against the Southern Pacific Company, Case No. 76, and also those prescribed in the case of the Nevada Hardware and Supply Company, *et al.*, against the Southern Pacific Company, and Tonopah and Goldfield Railroad Company, No. 139, need substantial modification in view of changed conditions.

The Commission is, therefore, of the opinion that the orders heretofore entered in both of those cases should be vacated and set aside, and that in lieu thereof the Southern Pacific Company, respondent herein, on or before July 1, 1913, should apply and make effective between various points in Nevada the mileage class rates and specific rates set forth in the schedule annexed to the order made in this case. It is, of course, to be understood that the vacating of the previous orders in this case is subject to the condition that the respondent company comply with the order made herein.

ORDER

Pursuant to the foregoing, on this the 18th day of June, A. D. 1913, it is hereby ordered: That on or before the 1st day of July, A. D. 1913, the respondent com-

pany, in lieu of the rates now in effect between the points named, apply and make effective the mileage class rates and specific rates set forth in the schedule hereto annexed, and marked "Schedule A" and made a part of this order.

It is further ordered: That in the application of said schedule no rates shall be applied between any points, whether specifically mentioned or not, in excess of those now in effect between the same points.

It is still further ordered: That, upon the application of the rates set forth in "Schedule A" at the date named herein, the orders heretofore made by this Commission in Cases Nos. 76 and 139 be vacated and set aside, and this order be deemed a full substitute for the orders in said Cases Nos. 76 and 139.

[SEAL]

H. F. BARTINE, *Chief Commissioner*,
J. F. SHAUGHNESSY, *First Associate Commissioner*,
W. H. SIMMONS, *Second Associate Commissioner*.

Attest: E. H. WALKER, *Secretary*.

SCHEDULE A—DISTANCE CLASS RATES APPLYING BETWEEN MAIN-LINE STATIONS IN NEVADA

NOTE—These rates to be alternative with specific rates.

Distances—	RATE IN CENTS PER 100 POUNDS												
	Class	1	2	3	4	5	A	B	C	D	E		
5 and under	10	09	08	07	06	05	04	03	02	01	00		
10 and over 5	14	13	11	10	09	08	07	06	05	04	03		
15 and over 10	18	16	14	13	12	11	10	09	08	07	06		
20 and over 15	22	20	18	15	14	13	12	11	10	09	08		
25 and over 20	26	23	20	18	16	15	14	13	12	11	10		
30 and over 25	28	26	22	20	18	16	15	14	13	12	11		
35 and over 30	31	27	24	21	19	18	17	16	15	14	13		
40 and over 35	34	30	27	23	21	20	19	18	17	16	15		
45 and over 40	37	32	29	25	23	22	21	20	19	18	17		
50 and over 45	40	36	31	27	25	24	23	22	21	20	19		
55 and over 50	42	36	31	27	25	24	23	22	21	20	19		
60 and over 55	44	37	33	29	26	25	24	23	22	21	20		
65 and over 60	46	39	35	30	28	26	25	24	23	22	21		
70 and over 65	48	41	36	31	29	27	26	25	24	23	22		
75 and over 70	50	43	38	33	30	28	27	26	25	24	23		
80 and over 75	52	44	39	34	31	29	28	27	26	25	24		
85 and over 80	54	46	41	36	32	30	29	28	27	26	25		
90 and over 85	56	48	42	37	34	32	31	30	29	28	27		
95 and over 90	58	49	43	38	35	33	32	31	30	29	28		
100 and over 95	60	51	43	39	36	34	33	32	31	30	29		
105 and over 100	62	53	45	40	37	35	34	33	32	31	30		
110 and over 105	64	54	46	41	38	36	35	34	33	32	31		
115 and over 110	66	56	48	43	39	37	36	35	34	33	32		
120 and over 115	68	58	50	45	41	39	38	37	36	35	34		
125 and over 120	70	60	52	47	43	41	40	39	38	37	36		
130 and over 125	72	61	53	48	44	42	41	40	39	38	37		
135 and over 130	74	63	55	50	46	44	43	42	41	40	39		
140 and over 135	76	65	57	52	48	46	45	44	43	42	41		
145 and over 140	78	66	58	53	49	47	46	45	44	43	42		
150 and over 145	80	68	60	55	51	49	48	47	46	45	44		
155 and over 150	82	70	62	57	53	51	50	49	48	47	46		
160 and over 155	84	71	63	58	54	52	51	50	49	48	47		
165 and over 160	86	73	65	60	56	54	53	52	51	50	49		
170 and over 165	88	75	67	62	58	56	55	54	53	52	51		
175 and over 170	90	77	69	64	60	58	57	56	55	54	53		
180 and over 175	92	78	70	65	61	59	58	57	56	55	54		
185 and over 180	94	80	72	67	63	61	60	59	58	57	56		
190 and over 185	96	82	74	69	65	63	62	61	60	59	58		
195 and over 190	98	83	75	70	66	64	63	62	61	60	59		
200 and over 195	100	85	77	72	68	66	65	64	63	62	61		
205 and over 200	102	87	79	74	70	68	67	66	65	64	63		
210 and over 205	104	88	80	75	71	69	68	67	66	65	64		
215 and over 210	106	90	82	77	73	71	70	69	68	67	66		
220 and over 215	108	92	84	79	75	73	72	71	70	69	68		
225 and over 220	110	94	86	81	77	75	74	73	72	71	70		
230 and over 225	112	95	87	82	78	76	75	74	73	72	71		
235 and over 230	114	97	89	84	80	78	77	76	75	74	73		
240 and over 235	116	99	91	86	82	80	79	78	77	76	75		
245 and over 240	118	100	93	88	84	82	81	80	79	78	77		
250 and over 245	120	102	95	90	86	84	83	82	81	80	79		
255 and over 250	121	103	96	91	87	85	84	83	82	81	80		
260 and over 255	123	105	98	93	89	87	86	85	84	83	82		
265 and over 260	124	105	99	94	90	88	87	86	85	84	83		
270 and over 265	125	106	100	95	91	89	88	87	86	85	84		
275 and over 270	126	107	101	96	92	90	89	88	87	86	85		
280 and over 275	128	109	103	98	94	92	91	90	89	88	87		
285 and over 280	129	110	104	99	95	93	92	91	90	89	88		
290 and over 285	130	111	105	100	96	94	93	92	91	90	89		
295 and over 290	131	111	106	101	97	95	94	93	92	91	90		

District—	RATE IN CENTS PER 100 POUNDS										
	Class	1	2	3	4	5	A	B	C	D	E
300 and over 295	133	113	93	83	76	76	53	40	33	27	27
305 and over 300	134	114	94	84	77	77	54	40	34	27	27
310 and over 305	135	115	95	84	78	78	54	41	34	27	27
315 and over 310	136	116	95	85	78	78	54	41	34	27	27
320 and over 315	138	117	97	86	79	79	55	41	35	28	28
325 and over 320	139	118	97	87	80	80	56	42	35	28	28
330 and over 325	140	119	98	88	81	81	56	42	35	28	28
335 and over 330	141	120	99	88	81	81	56	42	35	28	28
340 and over 335	143	122	100	89	82	82	57	43	36	29	29
345 and over 340	144	122	101	90	83	83	58	43	36	29	29
350 and over 345	145	123	102	91	83	83	58	44	36	29	29
355 and over 350	146	124	102	91	84	84	58	44	37	29	29
360 and over 355	147	125	103	92	85	85	59	44	37	29	29
365 and over 360	148	126	104	93	85	85	59	44	37	30	30
370 and over 365	149	127	104	93	86	86	60	45	37	30	30
375 and over 370	150	128	105	94	86	86	60	45	38	30	30
380 and over 375	151	128	106	94	87	87	60	45	38	30	30
385 and over 380	152	129	106	95	87	87	61	46	38	30	30
390 and over 385	153	130	107	96	88	88	61	46	38	31	31
395 and over 390	154	131	108	96	89	89	62	46	39	31	31
400 and over 395	155	132	109	97	89	89	62	47	39	31	31
405 and over 400	156	133	109	98	90	90	62	47	39	31	31
410 and over 405	157	133	110	98	90	90	63	47	39	31	31
415 and over 410	158	134	111	99	91	91	63	47	40	32	32
420 and over 415	159	135	111	99	91	91	64	48	40	32	32
425 and over 420	160	136	112	100	92	92	64	48	40	32	32
430 and over 425	161	137	113	101	93	93	64	48	40	32	32
435 and over 430	162	138	113	101	93	93	65	49	41	32	32
440 and over 435	163	139	114	102	94	94	65	49	41	33	33
445 and over 440	164	139	115	103	94	94	66	49	41	33	33

Between Verdi, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Reno		9	8	6	6	6	6	4	3	3	3
Sparks		13	12	10	9	8	8	5	5	4	4
Wadsworth		35	30	27	24	21	21	14	13	11	9
Fernley		35	30	27	24	21	21	14	13	11	9
Hazen		39	33	29	25	23	23	17	14	12	9
Parran		49	41	37	31	29	29	20	17	14	12
Lovelock		66	56	46	41	37	37	22	20	17	13
Nenzel (Oreana)		70	60	49	44	39	39	24	21	17	14
Rye Patch		74	63	52	46	43	43	26	22	19	15
Imlay		82	70	57	51	47	47	28	25	21	16
Mill City		82	70	57	51	47	47	28	25	21	16
Winnemucca		94	80	66	59	54	54	33	28	24	19
Golconda		102	87	71	64	57	57	36	31	26	20
Battle Mountain		115	96	83	69	57	57	43	35	30	24
Beowawe		115	96	86	69	57	57	45	38	32	25
Pallade		115	96	86	69	57	57	46	38	33	26
Carlisle		115	96	86	69	57	57	46	38	33	27
Elko		115	96	86	69	57	57	46	38	34	28
Halleck		137	115	101	82	69	69	49	43	35	29
Deeth		146	122	103	88	73	73	49	44	35	29
Wells		150	128	105	92	77	77	50	45	36	30
Cobre		154	128	111	92	77	77	50	47	36	32
Montello		154	128	113	92	77	77	51	48	36	32
Tecoma		154	128	113	92	77	77	51	49	36	32
Fallon		50	42	37	33	30	30	20	17	15	13
Lahontan		48	41	35	31	29	29	20	17	15	12
Churchill		56	48	42	36	34	34	20	19	15	14
Dayton		64	54	47	42	39	39	21	20	15	15
Mound House		66	56	48	43	40	40	22	22	17	15
Wabuska		60	51	45	38	36	36	20	20	15	15
Schurz		76	64	52	47	43	43	24	23	17	16
Thorne		87	74	61	55	51	51	28	28	21	19
Luning		95	81	66	60	55	55	32	29	24	20
Mina		99	85	69	62	58	58	33	30	24	21
Tonopah Junction		103	88	72	65	60	60	35	31	25	22
Candelaria		109	93	76	69	64	64	39	33	28	23
Queen		117	100	82	74	68	68	41	35	29	25

Between Reno, Nevada, and—											
Verdi	9	8	6	6	6	6	4	3	3	3	3
Lawton	4	4	4	4	3	3	3	3	3	3	3
Sparks	4	4	4	4	3	3	3	3	3	3	3
Clark	18	16	14	12	11	11	7	6	5	5	5
Wadsworth	30	27	23	20	18	18	10	10	8	8	8
Fernley	30	27	23	20	18	18	10	10	8	8	8
Hazen	35	30	27	24	21	21	14	13	11	9	9
Parran	45	38	34	29	27	27	19	16	13	11	11
Huxley	47	40	36	30	28	28	20	16	14	11	11
Lovelock	57	48	42	37	34	34	20	19	15	12	12
Nenzel	66	56	46	41	37	37	22	20	17	13	13
Rye Patch	70	60	49	44	39	39	24	21	17	14	14
Humboldt	74	63	52	46	43	43	26	22	19	15	15
Imlay	78	66	55	49	45	45	27	23	20	16	16

		RATE IN CENTS PER 100 POUNDS										
Between Reno, Nevada, and—		Class	1	2	3	4	5	A	B	C	D	E
Mill City	78	68	55	49	45	45	27	23	20	16		
Winnemucca	90	77	63	56	52	52	31	27	23	18		
Golconda	98	83	69	61	56	56	35	29	25	20		
Battle Mountain	114	96	80	69	57	57	41	34	29	23		
Beowawe	115	96	86	69	57	57	44	37	31	25		
Palisade	115	96	86	69	57	57	45	38	32	26		
Carlin	115	96	86	69	57	57	46	38	33	26		
Elko	115	96	86	69	57	57	46	38	34	27		
Halleck	137	115	99	82	69	69	48	42	35	28		
Deeth	145	122	102	85	73	73	49	44	35	29		
Wells	145	126	104	92	77	77	49	44	35	30		
Cobre	154	128	109	92	77	77	50	47	36	31		
Montello	154	128	111	92	77	77	51	48	36	32		
Tecoma	154	128	112	92	77	77	51	48	36	32		
Fallon	41	34	31	27	24	24	18	14	12	10		
Lahontan	39	33	29	25	23	23	17	14	12	9		
Churchill	47	40	36	30	28	28	20	16	14	11		
Dayton	55	46	41	36	33	33	20	19	15	12		
Mound House	57	48	42	37	34	34	20	19	15	12		
Wabuska	51	43	39	32	30	30	20	18	15	12		
Schurz	66	56	46	41	37	37	22	20	17	13		
Thorne	78	66	55	49	45	45	27	23	20	16		
Luning	98	73	60	54	49	49	30	26	22	17		
Mina	90	77	63	56	52	52	31	27	23	18		
Tonopah Junction	94	80	66	59	54	54	33	28	24	19		
Candelaria	100	85	70	63	58	58	35	30	25	20		
Queen	108	92	76	68	62	62	38	32	27	22		
Between Sparks, Nevada, and—												
Verdi	13	12	10	9	8	8	5	5	4	4		
Reno	4	4	4	4	3	3	3	3	3	3		
Wadsworth	27	23	19	18	16	16	9	9	7	7		
Fernley	27	23	19	18	16	16	9	9	7	7		
Hazen	35	30	27	24	21	21	14	13	11	9		
Parran	45	38	34	29	27	27	19	16	13	11		
Lovelock	57	48	42	37	34	34	20	19	15	12		
Nenzel	66	56	46	41	37	37	22	20	17	13		
Rye Patch	68	58	48	43	38	38	23	20	17	14		
Imlay	76	66	53	48	44	44	26	23	19	15		
Mill City	78	66	55	49	45	45	27	23	20	16		
Winnemucca	90	77	63	56	52	52	31	27	23	18		
Golconda	98	82	67	60	55	55	34	29	24	19		
Battle Mountain	112	95	78	69	57	57	40	34	28	22		
Beowawe	115	96	86	69	57	57	44	37	31	25		
Palisade	115	96	86	69	57	57	45	38	32	26		
Carlin	115	96	86	69	57	57	46	38	33	26		
Elko	115	96	86	69	57	57	46	38	34	27		
Halleck	137	115	99	82	69	69	48	42	35	28		
Deeth	144	122	101	88	73	73	49	43	35	29		
Wells	145	126	104	92	77	77	49	44	35	30		
Cobre	154	128	109	92	77	77	50	47	36	31		
Montello	154	128	111	92	77	77	51	48	36	32		
Tecoma	154	128	112	92	77	77	51	48	36	32		
Fallon	41	34	31	27	24	24	18	14	12	10		
Lahontan	39	33	29	25	23	23	17	14	12	9		
Churchill	47	40	36	30	28	28	20	16	14	11		
Dayton	55	46	41	36	33	33	20	19	15	12		
Mound House	57	48	42	37	34	34	20	19	15	12		
Wabuska	51	43	39	32	30	30	20	18	15	12		
Schurz	66	56	46	41	37	37	21	20	16	13		
Thorne	78	66	55	49	45	45	26	23	19	16		
Luning	98	73	60	54	49	49	30	26	22	17		
Mina	90	77	63	56	52	52	31	27	23	18		
Tonopah Junction	94	80	66	59	54	54	32	28	24	19		
Candelaria	100	85	70	63	58	58	35	30	25	20		
Queen	108	92	76	68	62	62	38	32	27	22		
Between Fernley, Nevada, and—												
Verdi	35	30	27	24	21	21	14	13	11	9		
Reno	30	27	23	20	18	18	10	10	8	8		
Sparks	27	23	19	18	16	16	9	9	7	7		
Wadsworth	13	12	10	9	8	8	5	5	4	4		
Hazen	13	12	10	9	8	8	5	5	4	4		
Parran	30	27	23	20	18	18	10	10	8	8		
Lovelock	45	38	34	29	27	27	19	16	13	11		
Nenzel	51	43	39	32	30	30	20	18	15	12		
Rye Patch	53	45	40	34	32	32	20	18	15	12		
Imlay	63	53	44	40	36	36	21	19	16	13		
Mill City	66	56	46	41	37	37	22	20	17	13		
Winnemucca	78	66	55	49	45	45	27	23	20	16		
Golconda	84	71	59	53	48	48	29	25	21	17		
Battle Mountain	100	85	70	63	57	57	35	30	25	20		
Beowawe	114	96	80	69	57	57	41	34	29	23		
Palisade	115	96	84	69	57	57	43	36	30	24		

RATE IN CENTS PER 100 POUNDS

Between Fernley, Nevada, and—

Class	1	2	3	4	5	A	B	C	D	E
Carlin	115	96	86	69	57	57	44	37	31	25
Elko	115	96	86	69	57	57	45	38	32	26
Halleck	133	113	93	82	69	69	46	40	33	27
Deeth	136	116	95	85	73	73	47	41	34	27
Wells	141	120	99	88	77	77	48	42	35	28
Cobre	149	127	104	92	77	77	50	45	36	30
Montello	152	128	106	92	77	77	50	46	36	30
Tecoma	154	128	108	92	77	77	50	46	36	31
Fallon	27	23	19	18	16	16	9	9	7	7
Lahontan	22	19	17	14	13	13	8	7	6	6
Churchill	40	35	29	27	24	24	14	14	11	11
Dayton	55	46	41	36	33	33	20	19	15	12
Mound House	57	48	42	37	34	34	20	19	15	12
Wabuska	49	43	37	32	29	29	18	17	13	12
Schurz	66	56	46	41	37	37	20	19	15	13
Thorne	78	66	55	49	45	45	21	21	16	16
Luning	86	73	60	54	49	49	23	23	19	17
Mina	90	77	63	56	52	52	24	24	20	18
Tonopah Junction	94	80	66	59	54	54	25	25	20	19
Candelaria	100	85	70	63	58	58	33	30	23	20
Queen	108	92	76	68	62	62	35	32	25	22

Between Hazen, Nevada, and—

Verdi	39	33	29	25	23	23	17	14	12	9
Reno	35	30	27	24	21	21	14	13	11	9
Sparks	35	30	27	24	21	21	14	13	11	9
Wadsworth	22	19	17	14	13	13	8	7	6	6
Fernley	13	12	10	9	8	8	5	5	4	4
Parran	22	19	17	14	13	13	8	7	6	6
Lovelock	41	34	31	27	24	24	18	14	12	10
Nenzel	45	38	34	29	27	27	19	16	13	11
Rye Patch	49	41	37	31	29	29	20	17	14	12
Imlay	57	48	42	37	34	34	20	19	15	12
Mill City	57	48	42	37	34	34	20	19	15	12
Winnemucca	72	61	50	45	41	41	25	22	18	14
Golconda	78	66	55	49	45	45	27	23	20	16
Battle Mountain	96	82	67	60	55	55	34	29	24	19
Beowawe	108	92	76	68	57	57	38	32	27	22
Palisade	115	96	81	69	57	57	41	35	29	23
Carlin	115	96	84	69	57	57	43	36	30	24
Elko	115	96	86	69	57	57	45	38	31	25
Halleck	130	111	91	81	69	69	46	39	33	26
Deeth	134	114	94	84	73	73	47	40	33	27
Wells	138	117	97	86	77	77	48	41	34	28
Cobre	147	125	103	92	77	77	49	44	35	29
Montello	150	128	106	92	77	77	50	45	36	30
Tecoma	151	128	106	92	77	77	50	45	36	30
Fallon	13	12	10	9	8	8	5	5	4	4
Lahontan	9	8	6	6	6	6	4	3	3	3
Churchill	27	23	19	18	16	16	9	9	7	7
Dayton	45	41	34	30	27	27	16	15	12	12
Mound House	49	45	37	32	29	29	18	17	13	12
Wabuska	36	32	27	24	21	21	13	12	9	9
Schurz	63	56	46	40	36	36	20	19	15	13
Thorne	78	66	55	49	45	45	20	20	15	15
Luning	86	73	60	54	49	49	23	23	17	17
Mina	90	77	63	56	52	52	25	24	18	18
Tonopah Junction	94	80	66	59	54	54	26	26	19	19
Candelaria	100	85	70	63	58	58	28	28	21	20
Queen	108	92	76	68	62	62	32	32	24	22

Between Parran, Nevada, and—

Verdi	49	41	37	31	29	29	20	17	14	12
Reno	45	38	34	29	27	27	19	16	13	11
Sparks	45	38	34	29	27	27	19	16	13	11
Wadsworth	37	32	28	25	22	22	16	14	12	9
Fernley	30	27	23	20	18	18	10	10	8	8
Hazen	22	19	17	14	13	13	8	7	6	6
Lovelock	30	27	23	20	18	18	10	10	8	8
Nenzel	37	32	28	25	22	22	16	14	12	9
Rye Patch	39	33	29	25	23	23	17	14	12	9
Imlay	47	40	36	30	28	28	20	16	14	11
Mill City	49	41	37	31	29	29	20	17	14	12
Winnemucca	60	51	42	38	35	35	21	19	15	12
Golconda	70	60	49	44	39	39	24	21	17	14
Battle Mountain	86	73	60	54	49	49	30	26	22	17
Beowawe	100	85	70	63	57	57	35	30	25	20
Palisade	106	90	74	66	57	57	37	31	27	21
Carlin	110	94	77	69	57	57	39	33	28	22
Elko	115	96	83	69	57	57	43	35	30	24
Halleck	124	105	87	78	69	69	44	37	31	25
Deeth	128	109	90	80	73	73	46	38	32	26
Wells	131	111	92	82	75	75	46	39	33	26
Cobre	141	120	99	98	77	77	48	42	35	28

RATE IN CENTS PER 100 POUNDS

Between Parran, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Montello	145	123	102	91	77	77	77	49½	44	36½	29
Tecoma	147	125	108	92	77	77	77	49½	44	36½	29
Fallon	36	31	27	23	21	21	18	12½	9½	9½	
Labontan	31½	27	23	20	18½	18½	10½	10	8	8	
Churchill	49½	42	36	32	29	29	17½	16½	13½	13½	
Dayton	67½	60	50	43	39	39	20½	19½	15½	15½	
Mound House	72	64	53	45	41	41	20½	19½	15½	15½	
Wabaska	58½	51	44	38	34	34	20½	19½	15½	15½	
Schurz	78½	70	57½	49½	47	47	20½	20½	15½	15½	
Thorne	91½	81	71½	61½	57	57	23½	23	17	17	
Luning	107	92	77	68	62	62	27½	26½	20½	20½	
Mina	111	96	80	70	65	65	28½	28½	21½	21½	
Tonopah Junction	118	99	83	73	67	67	29½	29½	22	22	
Candelaria	122	104	87	77	71	71	33½	33	24½	24½	
Queen	130	111	98	82	76	76	36½	36	27	27	

Between Lovelock, Nevada, and—

Verdi	66	56	46	41	37	37	22½	20	17	13	
Reno	57	48	42	37	34	34	20½	19	16	12	
Sparks	57	48	42	37	34	34	20½	19	15	12	
Wadsworth	49	41	37	31	29	29	20½	17	14	12	
Fernley	45	38	34	29	27	27	19	16	13	11	
Hazen	41	34	31	27	24	24	18	14	12	10	
Parran	30	27	23	20	18½	18½	10½	10	8	8	
Huxley	27	23	19	18	16	16	9½	9½	7½	7½	
Nenzel	13½	12	10½	9	8	8	5½	5½	4½	4½	
Rye Patch	22½	19	17	14	13	13	8	7	6½	6½	
Humboldt	30	27	23	20	18½	18½	10½	10	8	8	
Imlay	33	29	26	22	19	19	13	12	9½	9	
Mill City	35	30	27	24	21	21	14½	13	11	9	
Winnemucca	47	40	36	30	28	28	20	16	14	11	
Golconda	53	45	40	34	32	32	20½	18	15	12	
Battle Mountain	74	63	52	45	43	43	26½	22	19	15	
Beowawe	86	73	60	54	49	49	30½	26	22	17	
Palisade	94	80	66	59	54	54	33½	28	24	19	
Carlin	96	82	67	60	55	55	34½	29	24	19	
Elko	106	90	74	66	57½	57½	37½	31	27	21	
Halleck	114	97	80	71	66	66	41	34	29	23	
Deeth	118	100	83	74	68	68	43	35	30	24	
Wells	124	106	87	78	71	71	44½	37	31	25	
Cobre	133	113	93	83	76	76	46½	40	33	27	
Montello	138	117	97	86	77	77	48	41	34½	28	
Tecoma	139	118	97	87	77	77	48½	42	34½	28	
Fallon	54½	46	41	36	32	32	20½	19½	15½	14½	
Labontan	50	42	37½	33½	30	30	20½	17½	15½	13½	
Churchill	68	57	50	45	40	40	20½	20½	15½	15½	
Dayton	84½	75	62½	53½	51	51	21½	20½	15½	15½	
Mound House	89	79	68	59½	53	53	22½	22½	17	17	
Wabaska	77	66	58	50½	45	45	20½	20½	15½	15½	
Schurz	96	84½	74½	64	59	59	24½	23½	17½	17½	
Thorne	111	99	86	76	69	69	28½	28½	21½	21½	
Luning	121	107	91	81	73	73	32½	32½	24	24	
Mina	123	108	94	83	76	74	33½	33	24½	24½	
Tonopah Junction	127	112	97	86	77	74	35	34½	25½	25½	
Candelaria	135	119	101	90	82	77	39	38½	28½	28½	
Queen	140	121	107	96	81	76	41	40½	29½	29½	

Between Nenzel, Nevada, and—

Verdi	70	60	49	44	39	39	24½	21	17½	14	
Reno	66	56	46	41	37	37	22½	20	17	13	
Sparks	66	56	46	41	37	37	22½	20	17	13	
Wadsworth	55	46	41	36	33	33	20½	19	15	12	
Fernley	51	43	39	32	30	30	20½	18	15	12	
Hazen	45	38	34	29	27	27	19	16	13	11	
Parran	37	32	28	25	22	22	16½	14	12	9	
Lovelock	13½	12	10½	9	8	8	5½	5½	4½	4½	
Rye Patch	9	8	6	6	6	6	4½	3½	3½	3½	
Imlay	27	23	19	18	16	16	9½	9½	7½	7½	
Mill City	30	27	23	20	18½	18½	10½	10	8	8	
Winnemucca	41	34	31	27	24	24	18	14	12	10	
Golconda	49	41	37	31	29	29	20½	17	14	12	
Battle Mountain	68	58	48	43	38	38	23½	20	17	14	
Beowawe	80	68	56	50	46	46	28	24	20	16	
Palisade	88	75	62	51	51	51	31	26	22	18	
Carlin	92	78	64	58	53	53	32½	28	23	18	
Elko	100	85	70	63	57½	57½	35½	30	25	20	
Halleck	108	92	76	68	62	62	38½	32	27	22	
Deeth	114	97	80	71	66	66	41	34	29	23	
Wells	120	102	84	75	69	69	43½	36	30	24	
Cobre	130	111	91	81	75	75	46½	39	33	26	
Montello	134	114	94	84	77	77	47	40	33½	27	
Tecoma	136	116	95	85	77	77	47½	41	34	27	
Fallon	58½	50	44	38	35	35	20½	20½	15½	15½	
Labontan	54	46	40½	35½	33	33	20½	19½	15½	14½	

RATE IN CENTS PER 100 POUNDS											
Between Nensel, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Churchill	72	61	53	47	43	43	20½	20½	15½	15½	
Dayton	90	79	68	59	54	54	23½	23½	17½	17½	
Mound House	94½	83	71	61½	56	56	24½	24½	17½	17½	
Wabuska	81	70	61	53	48	48	21½	21½	16½	16½	
Schurz	104	92	80	69	63	63	26½	26½	19½	19½	
Thorne	115	108	89	78	72	72	30½	30½	22½	22½	
Luning	125	110	94	83	76	74	34½	34½	25½	25½	
Mina	128	112	97	85	77	74	35½	35½	26½	26½	
Tonopah Junction	131	115	100	88	79	76	36½	36½	27½	27½	
Candelaria	140	122	104	92	83	78	41	40½	29½	29½	
Queen	146	125	110	97	83	78	43½	42½	31	31	

Between Rye Patch, Nevada, and—

Verdi.....	74	63	52	46	43	43	26½	22	19	15	
Reno.....	70	60	49	44	39	39	24½	21	17½	14	
Sparks.....	68	58	48	43	38	38	23½	20	17	14	
Wadsworth.....	60	51	42	38	35	35	21½	19	15½	12	
Fernley.....	53	45	40	34	32	32	20½	18	15	12	
Hazen.....	49	41	37	31	29	29	20½	17	14	12	
Parran.....	39	33	29	25	23	23	17	14	12	9	
Lovelock.....	22½	19	17	14	13	13	8	7½	6½	6½	
Nensel.....	9	8	6½	6½	6	6	4½	3½	3½	3½	
Imlay.....	18	16	14½	12	11½	11½	7	6½	5½	5½	
Mill City.....	22½	19	17	14	13	13	8	7½	6½	6½	
Winnemucca.....	39	33	29	25	23	23	17	14	12	9	
Golconda.....	45	38	34	29	27	27	19	16	13	11	
Battle Mountain.....	63	53	44	40	36	36	21½	19	16	13	
Beowawe.....	78	66	55	49	45	45	27½	23	20	16	
Palisade.....	84	71	59	53	48	48	29½	25	21	17	
Carlin.....	88	75	62	55	51	51	31	26	22	18	
Elko.....	96	82	67	60	55	55	34½	29	24	19	
Halleck.....	104	88	73	65	60	60	36½	31	26	21	
Deeth.....	110	94	77	69	63	63	39½	33	28	22	
Wells.....	118	100	83	74	68	68	43	36	30	24	
Cobre.....	128	109	90	80	74	74	45½	38	32	26	
Montello.....	131	111	92	82	75	75	46½	39	33	26	
Tecoma.....	134	114	94	84	77	77	47	40	33½	27	
Fallon.....	62½	53	47	40	37	37	20½	20½	15½	15½	
Lahontan.....	58	49	43½	37½	35	35	20½	20½	15½	15½	
Churchill.....	76	64	56	49	45	45	21½	20½	15½	15½	
Dayton.....	91½	81	71	61	56	56	23½	23	17	17	
Mound House.....	98½	86	74	63½	58	58	26½	25½	19	19	
Wabuska.....	85	73	64	55	50	50	23½	23	17	17	
Schurz.....	107	96	83	71	65	65	27½	26½	20½	20½	
Thorne.....	119	106	92	80	74	74	31½	31½	23½	23½	
Luning.....	128	112	97	85	77	74	35½	35	26½	26½	
Mina.....	180	113	100	87	78	75	39½	36	27	27	
Tonopah Junction.....	133	116	103	90	79	76	37½	37	27½	27½	
Candelaria.....	142	123	107	94	84	78	42	41½	30½	30½	
Queen.....	148	127	113	98	84	79	44	43½	31½	31½	

Between Imlay, Nevada, and—

Verdi.....	82	70	57	51	47	47	28½	25	21	16	
Reno.....	78	66	55	49	45	45	27½	23	20	16	
Sparks.....	76	65	53	48	44	44	26½	23	19	15	
Wadsworth.....	68	58	48	43	38	38	23½	20	17	14	
Fernley.....	63	53	44	40	36	36	21½	19	16	13	
Hazen.....	57	48	42	37	34	34	20½	19	15	12	
Parran.....	47	40	36	30	28	28	20	16	14	11	
Lovelock.....	33	29	26	22	19	19	13	12	9½	9½	
Nensel.....	27	23	19	18	16	16	9½	9½	7½	7½	
Rye Patch.....	18	16	14½	12	11½	11½	7	6½	5½	5½	
Mill City.....	4½	4½	4½	4½	3½	3½	3½	3½	3½	3½	
Winnemucca.....	30	27	23	20	18½	18½	10½	10	8	8	
Golconda.....	37	32	28	25	22	22	16½	14	12	9	
Battle Mountain.....	55	46	41	36	33	33	20½	19	15	12	
Beowawe.....	70	60	49	44	39	39	24½	21	17½	14	
Palisade.....	78	68	56	49	45	45	27½	23	20	16	
Carlin.....	80	68	56	50	46	46	28	24	20	16	
Elko.....	90	77	63	56	52	52	31½	27	23	18	
Halleck.....	98	83	69	61	56	56	35	29	25	20	
Deeth.....	102	87	71	64	59	59	36½	31	26	20	
Wells.....	110	94	77	69	63	63	39½	33	28	22	
Cobre.....	123	105	86	77	71	71	44½	37	31	25	
Montello.....	128	109	90	80	74	74	45½	38	32	26	
Tecoma.....	129	110	90	81	74	74	46½	39	32	26	
Fallon.....	70½	60	52	46	42	42	21½	21½	16½	16½	
Lahontan.....	66	56	48½	43½	40	40	21½	20½	15½	15½	
Churchill.....	84	71	61	55	50	50	24½	20½	17½	17½	
Dayton.....	102	89	76	67	61	61	27½	26½	20½	20½	
Mound House.....	106½	93	79	69½	63	63	33	27½	20½	20½	
Wabuska.....	93	80	69	61	55	55	26½	25½	19	19	
Schurz.....	113	101	88	77	70	70	29½	29½	22	22	
Thorne.....	125	110	97	86	76	74	34½	34	25½	25½	

RATE IN CENTS PER 100 POUNDS

Between Inlay, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Luning		183	116	102	91	76	76	37	37	27	27
Mina		187	118	106	98	90	76	39	39	28	28
Tonopah Junction		140	121	108	96	81	76	41	40	29	29
Candelaria		160	129	112	100	87	79	45	45	32	32
Queen		153	130	118	104	87	81	45	44	32	32

Between Mill City, Nevada, and—

Verdi	82	70	57	51	47	47	28	26	21	16
Reno	78	66	55	49	45	45	27	23	20	16
Sparks	78	66	55	49	45	45	27	23	20	16
Wadsworth	70	60	49	44	39	39	24	21	17	14
Fernley	66	56	46	41	37	37	22	20	17	13
Hazen	57	48	42	37	34	34	20	19	16	12
Parran	49	41	37	31	29	29	20	17	14	12
Lovelock	35	30	27	24	21	21	14	13	11	9
Nenzel	30	27	23	20	18	18	10	10	8	8
Rye Patch	22	19	17	14	13	13	8	7	6	6
Inlay	4	4	4	4	3	3	3	3	3	3
Winnemucca	27	23	19	18	16	16	9	9	7	7
Golconda	35	30	27	24	21	21	14	13	11	9
Battle Mountain	53	45	40	34	32	32	20	18	15	12
Beowawe	68	58	48	43	38	38	23	20	17	14
Palisade	76	65	53	48	44	44	26	23	19	15
Carlin	78	66	55	49	45	45	27	23	20	16
Elko	88	75	62	55	51	51	31	26	22	18
Halleck	96	82	67	60	55	55	34	29	24	19
Deeth	100	85	70	63	58	58	35	30	25	20
Wells	106	92	76	68	62	62	38	32	27	22
Cobre	123	105	86	77	71	71	44	37	31	25
Montello	126	107	88	79	72	72	45	38	32	25
Tecoma	128	109	90	80	74	74	45	38	32	26
Fallon	70	60	52	46	42	42	22	20	17	16
Lahontan	66	56	48	43	40	40	21	21	16	15
Churchill	84	71	61	55	50	50	25	24	18	18
Dayton	102	89	76	67	61	61	28	27	20	20
Mound House	106	93	79	69	63	63	28	28	21	21
Wabuska	93	80	69	61	55	55	26	26	19	19
Schurz	117	104	88	77	70	70	31	30	23	23
Thorne	128	112	97	86	77	74	35	35	26	26
Luning	135	117	102	91	79	76	38	38	28	28
Mina	138	119	105	93	81	76	40	39	29	29
Tonopah Junction	143	123	108	96	82	77	41	41	30	30
Candelaria	151	130	112	100	87	80	45	45	32	32
Queen	154	131	118	104	87	81	45	45	32	32

Between Golconda, Nevada, and—

Verdi	102	87	71	64	57	57	36	31	26	20
Reno	98	83	69	61	56	56	35	29	25	20
Sparks	96	82	67	60	55	55	34	29	24	19
Wadsworth	88	75	62	55	51	51	31	26	22	18
Fernley	84	71	59	53	48	48	29	25	21	17
Hazen	78	66	55	49	45	45	27	23	20	16
Parran	70	60	49	44	39	39	24	21	17	14
Lovelock	53	45	40	34	32	32	20	18	15	12
Nenzel	49	41	37	31	29	29	20	17	14	12
Rye Patch	45	38	34	29	27	27	19	16	13	11
Inlay	37	32	28	25	22	22	16	14	12	9
Mill City	35	30	27	24	21	21	14	13	11	9
Winnemucca	18	16	14	12	11	11	7	6	5	5
Battle Mountain	37	30	27	24	21	21	14	13	11	9
Beowawe	47	40	36	30	28	28	20	16	14	11
Palisade	55	46	41	36	33	33	20	19	15	12
Carlin	57	48	42	37	34	34	20	19	15	12
Elko	70	60	49	44	39	39	24	21	17	14
Halleck	78	66	55	49	45	45	27	23	20	16
Deeth	82	70	57	51	47	47	28	25	21	16
Wells	90	77	63	56	52	52	31	27	23	18
Cobre	104	88	73	65	60	60	36	31	26	21
Montello	112	95	78	70	64	64	40	34	28	22
Tecoma	114	97	80	71	66	66	41	34	29	23
Fallon	91	78	65	58	53	53	29	28	22	20
Lahontan	87	74	61	55	51	51	28	26	21	19
Churchill	105	89	74	67	61	61	31	28	23	20
Dayton	123	107	89	79	72	72	35	34	25	25
Mound House	127	111	92	81	74	74	35	35	26	26
Wabuska	114	98	82	73	66	66	33	33	24	24
Schurz	133	116	101	89	79	76	37	37	27	27
Thorne	145	124	110	98	83	77	43	42	30	30
Luning	151	128	115	102	86	80	44	44	32	32
Mina	153	130	118	104	87	81	45	44	32	32
Tonopah Junction	155	132	120	106	89	81	45	45	33	33
Candelaria	162	139	125	111	92	88	49	48	35	35
Queen	163	139	127	107	89	81	48	47	34	34

RATE IN CENTS PER 100 POUNDS											
Between Winnemucca and—	Class	1	2	3	4	5	A	B	C	D	E
Verdi	94	80	66	59	54	54	64	33½	28	24	19
Reno	90	77	63	56	52	52	52	31½	27	23	18
Sparks	90	77	63	56	52	52	52	31½	27	23	18
Wadsworth	82	70	57	51	47	47	47	28½	25	21	16
Fernley	78	66	55	49	45	45	45	27½	23	20	16
Hazen	72	61	50	45	41	41	41	25½	22	18	14
Parran	60	51	42	38	35	35	35	21½	19	15½	12
Lovelock	47	40	36	30	28	28	28	20	16	14	11
Nenzel	41	34	31	27	24	24	24	18	14	12	10
Rye Patch	39	33	29	25	23	23	23	17	14	12	9
Humboldt	33	29	26	22	19	19	19	13	12	9½	9
Imlay	30	27	23	20	18½	18½	18½	10½	10	8	8
Mill City	27	23	19	18	16	16	16	9½	9½	7½	7½
Golconda	18	16	14½	12	11½	11½	11½	7	6½	5½	5½
Valmy	35	30	27	24	21	21	21	14½	13	11	9
Battle Mountain	41	34	31	27	24	24	24	18	14	12	10
Beowawe	53	45	40	34	32	32	32	20½	18	15	12
Palisade	63	53	44	40	36	36	36	21½	19	16	13
Carlin	68	58	48	43	38	38	38	23½	20	17	14
Elko	76	65	53	48	44	44	44	26½	23	19	15
Halleck	84	71	59	53	48	48	48	29½	25	21	17
Deeth	90	77	63	56	52	52	52	31½	27	23	18
Wells	96	82	67	60	55	55	55	34½	29	24	19
Cobre	112	95	78	70	64	64	64	40	34	28	22
Montello	118	100	83	74	68	68	68	43	35	30	24
Tecoma	121	103	85	76	70	70	70	44	36	30	24
Fallon	85½	73	60	54	49	49	49	27½	26½	20½	18½
Lahontan	81	69	56½	51½	47	47	47	26½	25½	19½	17½
Churchill	99	84	69	63	57	57	57	29½	25½	22	21½
Dayton	117	102	84	75	68	68	68	32½	32½	24	24
Mound House	121½	106	87	77½	70	70	70	33½	33	24½	24½
Wabuska	108	93	77	69	62	62	62	31	30½	23	23
Schurz	127	112	96	85	77	74	74	35	34½	25½	25½
Thorne	137	118	105	94	80	76	76	39½	39	28½	28½
Luning	146	125	110	99	83	78	78	43½	42½	31	31
Mina	150	128	113	101	85	80	80	44½	44	32	32
Tonopah Junction	152	129	116	103	86	81	81	45	44½	32½	32½
Candelaria	159	136	120	108	91	83	83	48	47½	34½	34
Queen	160	136	124	107	89½	81	81	47½	46½	34	34
Between Battle Mountain and—											
Verdi	115	96	83	69	57½	57½	57½	43	35	30	24
Reno	114	96	80	69	57½	57½	57½	41	34	29	23
Sparks	112	95	78	69	57½	57½	57½	40	34	28	22
Wadsworth	106	90	74	66	57½	57½	57½	37½	31	27	21
Fernley	100	85	70	63	57½	57½	57½	35½	30	25	20
Hazen	96	82	67	60	55	55	55	34½	29	24	19
Parran	86	73	60	54	49	49	49	30½	26	22	17
Lovelock	74	63	52	46	43	43	43	26½	22	19	15
Nenzel	68	58	48	43	38	38	38	23½	20	17	14
Rye Patch	63	53	44	40	36	36	36	21½	19	16	13
Imlay	55	46	41	36	33	33	33	20½	19	15	12
Mill City	53	45	40	34	32	32	32	20½	18	15	12
Winnemucca	41	34	31	27	24	24	24	18	14	12	10
Golconda	35	30	27	24	21	21	21	14½	13	11	9
Beowawe	30	27	23	20	18½	18½	18½	10½	10	8	8
Palisade	37	32	28	25	22	22	22	16½	14	12	9
Carlin	41	34	31	27	24	24	24	18	14	12	10
Elko	49	41	37	31	29	29	29	20½	17	14	12
Halleck	57	48	42	37	34	34	34	20½	19	15	12
Deeth	66	56	46	41	37	37	37	22½	20	17	13
Wells	74	63	52	46	43	43	43	26½	22	19	15
Cobre	88	76	62	55	51	51	51	31	26	22	18
Montello	96	82	67	60	55	55	55	34½	29	24	19
Tecoma	98	83	69	61	56	56	56	35	29	25	20
Fallon	109½	94	77	69	63	63	63	36½	34½	27	23½
Lahontan	105	90	73½	66½	61	61	61	35½	32½	26½	22½
Churchill	123	105	86	78	71	71	71	37½	37	27½	26½
Dayton	140	121	101	90	81	76	76	41	40½	29½	29½
Mound House	145	124	104	92½	83	77	77	43	42½	30½	30½
Wabuska	132	114	94	84	76	76	76	40	39½	29½	29½
Schurz	148	127	113	100	84	79	79	44	43½	31½	31½
Thorne	155	132	120	105	88	81	81	45½	45½	33	33
Luning	160	136	124	107	89½	81	81	47½	46½	34	34
Mina	161	137	125	107	89½	81	81	47½	47½	34½	34½
Tonopah Junction	163	139	127	107	89½	81	81	48½	47½	34½	34½
Candelaria	170	146	132½	112	92½	88	88	51½	50½	36½	36½
Queen	168	143	127½	107	89½	81	81	49½	48½	35½	35½
Between Beowawe, Nevada, and—											
Verdi	115	96	86	69	57½	57½	57½	45½	38	32	25
Reno	115	96	86	69	57½	57½	57½	44½	37	31	25
Sparks	115	96	86	69	57½	57½	57½	44½	37	31	25
Wadsworth	115	96	83	69	57½	57½	57½	43	35	30	24
Fernley	114	96	80	69	57½	57½	57½	41	34	29	23

RATE IN CENTS PER 100 POUNDS

Between Beowawe, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Hazen	108	92	76	68	57	57	38	32	27	22	
Parran	100	85	70	63	57	57	35	30	25	20	
Lovelock	86	73	60	54	49	49	30	26	22	17	
Nenzel	80	68	56	50	46	46	28	24	20	16	
Rye Patch	78	66	55	49	45	45	27	23	20	16	
Imlay	70	60	49	44	39	39	24	21	17	14	
Mill City	68	58	48	43	38	38	23	20	17	14	
Winnemucca	53	45	40	34	32	32	20	18	15	12	
Golconda	47	40	36	30	28	28	20	16	14	11	
Battle Mountain	30	27	23	20	18	18	10	8	8	8	
Palisade	18	16	14	12	11	11	7	6	5	5	
Carlin	27	23	19	18	16	16	9	9	7	7	
Elko	37	32	28	25	22	22	16	14	12	9	
Hallock	45	38	34	29	27	27	19	16	13	11	
Deeth	51	43	39	32	30	30	20	18	15	12	
Weils	57	48	42	37	34	34	20	19	15	12	
Cobre	76	65	53	48	44	44	26	23	19	15	
Montello	82	70	57	51	47	47	28	25	21	16	
Tecoma	84	71	59	53	48	48	29	25	21	17	
Fallon	121	104	86	77	65	65	41	37	29	26	
Labontan	117	100	82	74	63	63	40	35	29	25	
Churchill	135	115	95	86	73	73	43	41	31	29	
Dayton	152	129	110	98	84	84	45	44	32	32	
Mound House	153	130	113	100	86	81	45	44	32	32	
Wabaska	144	124	103	92	78	78	44	44	32	31	
Schurz	156	133	121	106	89	81	46	45	33	33	
Thorne	162	138	126	107	89	81	48	47	34	34	
Luning	166	141	127	107	89	81	49	48	35	35	
Mina	167	142	127	107	89	81	49	49	35	35	
Tonopah Junction	168	143	127	107	89	81	49	49	35	35	
Candelaria	174	149	132	112	92	83	52	52	37	37	
Queen	171	146	127	107	89	81	50	50	36	36	

Between Palisade, Nevada, and—

Verdi	115	96	86	69	57	57	46	38	33	26	
Reno	115	96	86	69	57	57	45	38	32	26	
Sparks	115	96	86	69	57	57	45	38	32	26	
Wadsworth	115	96	86	69	57	57	44	37	31	25	
Fernley	115	96	84	69	57	57	43	36	30	24	
Hazen	115	96	81	69	57	57	41	35	29	23	
Parran	106	90	74	66	57	57	37	31	27	21	
Lovelock	94	80	66	59	54	54	33	28	24	19	
Nenzel	88	75	62	55	51	51	31	26	22	18	
Rye Patch	84	71	59	53	48	48	29	25	21	17	
Imlay	78	66	55	49	45	45	27	23	20	16	
Mill City	76	65	53	48	44	44	26	23	19	15	
Winnemucca	68	58	44	40	36	36	21	19	16	13	
Golconda	55	46	41	36	33	33	20	19	15	12	
Battle Mountain	37	32	28	25	22	22	16	14	12	9	
Beowawe	18	16	14	12	11	11	7	6	5	5	
Carlin	9	8	6	6	6	6	4	3	3	3	
Elko	27	23	19	18	16	16	9	9	7	7	
Hallock	39	33	29	25	23	23	17	14	12	9	
Deeth	43	36	33	28	26	26	18	15	13	10	
Weils	51	43	39	32	30	30	20	18	15	12	
Cobre	68	58	48	43	38	38	23	20	17	14	
Montello	76	65	53	48	44	44	26	23	19	15	
Tecoma	78	66	55	49	45	45	27	23	20	16	
Fallon	129	108	91	78	65	65	44	40	31	27	
Labontan	124	104	87	75	63	63	43	38	31	26	
Churchill	142	119	100	87	73	73	44	44	32	30	
Dayton	155	132	115	99	84	81	45	45	33	33	
Mound House	157	134	118	101	86	81	46	46	33	33	
Wabaska	151	128	108	93	78	78	45	45	32	32	
Schurz	159	135	124	107	89	81	47	46	33	33	
Thorne	165	140	127	107	89	81	48	48	35	35	
Luning	168	143	127	107	89	81	49	49	35	35	
Mina	168	143	127	107	89	81	49	49	35	35	
Tonopah Junction	169	144	127	107	89	81	50	49	36	36	
Candelaria	175	150	132	112	92	83	52	52	37	37	
Queen	171	146	127	107	89	81	50	50	36	36	

Between Carlin, Nevada, and—

Verdi	115	96	86	69	57	57	46	38	33	27	
Reno	115	96	86	69	57	57	46	38	33	26	
Sparks	115	96	86	69	57	57	46	38	33	26	
Wadsworth	115	96	86	69	57	57	45	38	31	25	
Fernley	115	96	86	69	57	57	44	37	31	25	
Hazen	115	96	84	69	57	57	43	36	30	24	
Parran	110	94	77	69	57	57	39	33	28	22	
Lovelock	96	82	67	60	55	55	34	29	24	19	
Nenzel	92	78	64	58	53	53	32	28	23	18	
Rye Patch	88	75	62	56	51	51	31	26	22	18	
Imlay	80	68	56	50	46	46	28	24	20	16	

RATE IN CENTS PER 100 POUNDS												
Between Carlin, Nevada, and—		Class	1	2	3	4	5	A	B	C	D	E
Mill City	78	66	55	49	45	45	45	27	23	20	17	16
Winnemucca	68	58	48	43	38	38	38	23	20	17	14	13
Golconda	57	48	42	37	34	34	34	20	19	15	12	12
Battle Mountain	41	34	31	27	24	24	24	18	14	12	10	10
Beowawe	27	23	19	18	16	16	16	9	8	7	7	7
Pallade	9	8	6	6	6	6	6	4	3	3	3	3
Elko	22	19	17	14	13	13	13	8	7	6	6	6
Halleck	35	30	27	24	21	21	21	14	13	11	9	9
Deeth	39	33	29	25	23	23	23	17	14	12	9	9
Wells	47	40	36	30	28	28	28	20	16	14	11	11
Cobre	63	53	44	40	36	36	36	21	19	16	13	13
Montello	72	61	50	45	41	41	41	25	22	18	14	14
Tecoma	74	63	52	46	43	43	43	26	22	19	15	15
Fallon	128	108	94	78	65	65	65	44	41	32	29	29
Lahontan	124	104	90	75	63	63	63	44	39	31	27	27
Churchill	142	119	108	87	73	73	73	46	44	32	31	31
Dayton	157	134	118	99	84	84	84	46	46	33	33	33
Mound House	159	135	121	101	86	86	86	47	46	33	33	33
Wabuska	151	128	111	93	78	78	78	45	45	33	33	33
Schurz	161	137	125	107	89	89	89	47	47	34	34	34
Thorne	166	141	127	107	88	88	88	48	48	35	35	35
Luning	169	144	127	107	89	89	89	50	49	36	36	36
Mina	169	144	127	107	89	89	89	50	49	36	36	36
Tonopah Junction	170	145	127	107	89	89	89	50	50	36	36	36
Candelaria	176	150	132	112	92	92	92	53	53	37	37	37
Queen	172	146	127	107	89	89	89	51	50	36	36	36
Between Elko, Nevada, and—												
Verdi	115	96	86	69	57	57	57	46	38	34	29	29
Reno	115	96	86	69	57	57	57	46	38	34	29	29
Sparks	115	96	86	69	57	57	57	46	38	34	29	29
Wadsworth	115	96	86	69	57	57	57	46	38	33	29	29
Fernley	115	96	86	69	57	57	57	45	38	32	29	29
Hazen	115	96	86	69	57	57	57	45	38	31	25	25
Parran	115	96	83	69	57	57	57	43	35	30	24	24
Lovelock	108	90	74	66	57	57	57	37	31	27	21	21
Nenzel	100	85	70	63	57	57	57	35	30	25	20	20
Rye Patch	96	82	67	60	55	55	55	34	29	24	19	19
Imlay	90	77	63	56	52	52	52	31	27	23	18	18
Mill City	88	75	62	55	51	51	51	31	26	22	19	19
Winnemucca	76	65	53	48	44	44	44	26	23	19	15	15
Golconda	70	60	49	44	39	39	39	24	21	17	14	14
Battle Mountain	49	41	37	31	29	29	29	20	17	14	11	11
Beowawe	37	32	28	25	22	22	22	16	14	12	9	9
Pallade	27	23	19	18	16	16	16	9	8	7	7	7
Carlin	22	19	17	14	13	13	13	8	7	6	6	6
Halleck	22	19	17	14	13	13	13	8	7	6	6	6
Deeth	30	27	23	20	18	18	18	10	8	8	8	8
Wells	39	33	29	25	23	23	23	17	14	12	9	9
Cobre	53	45	40	34	32	32	32	20	18	15	11	11
Montello	60	51	42	38	35	35	35	21	19	15	11	11
Tecoma	66	56	46	41	37	37	37	22	20	17	1	1
Fallon	128	108	96	78	65	65	65	45	43	33	32	32
Lahontan	124	108	92	75	63	63	63	45	41	32	32	32
Churchill	142	119	106	87	73	73	73	46	46	33	33	33
Dayton	160	137	120	99	84	84	84	48	47	34	34	34
Mound House	163	139	123	101	86	86	86	48	47	34	34	34
Wabuska	151	128	113	93	78	78	78	47	46	34	34	34
Schurz	165	140	127	107	89	89	89	48	48	35	35	35
Thorne	168	143	127	107	89	89	89	49	49	35	35	35
Luning	170	145	127	107	89	89	89	50	50	36	36	36
Mina	171	146	127	107	89	89	89	50	50	36	36	36
Tonopah Junction	171	146	127	107	89	89	89	50	50	36	36	36
Candelaria	176	151	132	112	92	92	92	53	53	38	38	38
Queen	172	147	127	107	89	89	89	51	50	36	36	36
Between Halleck, Nevada, and—												
Verdi	137	115	101	82	69	69	69	49	43	35	35	35
Reno	137	115	99	82	69	69	69	48	42	35	35	35
Sparks	137	115	99	82	69	69	69	48	42	35	35	35
Wadsworth	136	115	95	82	69	69	69	47	41	34	34	34
Fernley	133	113	93	82	69	69	69	46	40	33	33	33
Hazen	130	111	91	81	69	69	69	46	39	33	33	33
Parran	124	105	87	73	69	69	69	44	37	31	31	31
Lovelock	114	97	80	71	66	66	66	41	34	29	29	29
Nenzel	108	92	76	68	62	62	62	39	32	27	27	27
Rye Patch	104	88	73	65	60	60	60	36	31	26	26	26
Imlay	98	83	69	61	56	56	56	35	29	25	25	25
Mill City	96	82	67	60	55	55	55	34	29	24	24	24
Winnemucca	84	71	59	53	48	48	48	29	25	21	21	21
Golconda	78	66	55	49	45	45	45	27	23	20	20	20
Battle Mountain	57	48	42	37	34	34	34	20	19	15	15	15
Beowawe	45	38	34	29	27	27	27	19	16	13	13	13
Pallade	39	33	29	25	23	23	23	17	14	12	12	12

RATE IN CENTS PER 100 POUNDS

Between Halleck, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Carlin		35	30	27	24	21	21	144	12	11	9
Elko		22½	19	17	14	13	13	8	7½	6½	6½
Deeth		18½	12	10½	9	8	8	5½	5½	4½	4½
Wells		27	23	19	18	16	16	94	94	7½	7½
Cobre		45	38	34	29	27	27	19	16	13	11
Montello		51	43	39	32	30	30	20½	18	15	12
Tecoma		55	46	41	36	33	33	20½	19	15	12
Fallon		149½	123	101	90	77	77	47	44½	33½	30½
Lahontan		139	119	97½	87½	75	75	46½	42½	33½	29½
Churchill		157	134	110	99	85	81	48	47½	34½	33½
Dayton		166	141	125	107	88½	81	49½	48½	35½	35½
Mound House		166	141	127½	107	88½	81	49½	48½	35½	35½
Wabuska		164	140	127	107	88½	81	48½	48	35	35
Schurz		167	142	127½	107	88½	81	49½	49	35½	35½
Thorne		170	145	127½	107	88½	81	50½	50	36½	36½
Laming		171½	146	127½	107	88½	81	50½	50½	36½	36½
Mina		172	146½	127½	107	88½	81	51	50½	36½	36½
Topopah Junction		172	146½	127½	107	88½	81	51	50½	36½	36½
Candelaria		177½	152	132½	112	92½	83	53½	53	38½	38½
Queen		172½	147	127½	107	88½	81	51	50½	36½	36½

Between Deeth, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Vardi		146	122	103	88	73½	73½	49½	44	35½	29
Reno		145	122	102	88	73½	73½	49½	44	35½	29
Sparks		144	122	101	88	73½	73½	49½	43	35½	29
Wadsworth		139	118	97	87	73½	73½	48½	42	34½	28
Fernley		136	116	96	85	73½	73½	47½	41	34	27
Hazen		134	114	94	84	73½	73½	47	40	33½	27
Parran		128	109	90	80	73½	73½	45½	38	32	26
Lovelock		118	100	83	74	68	68	43	35	30	24
Nenasi		114	97	80	71	66	66	41	34	29	23
Rye Patch		110	94	77	69	63	63	39½	33	28	22
Imley		102	87	71	64	59	59	36½	31	26	20
Mill City		100	86	70	63	58	58	35½	30	25	20
Winnemucca		90	77	63	56	52	52	31½	27	23	18
Golconda		82	70	57	51	47	47	28½	25	21	16
Battle Mountain		66	56	46	41	37	37	22½	20	17	13
Beowawe		51	43	39	32	30	30	20½	18	15	12
Palisade		43	36	33	28	26	26	18	16	13	10
Carlin		39	33	29	25	23	23	17	14	12	9
Elko		30	27	23	20	18½	18½	10½	10	8	8
Halleck		18½	12	10½	9	8	8	5½	5½	4½	4½
Wells		18	16	14½	12	11½	11½	7	6½	5½	5½
Cobre		39	33	29	25	23	23	17	14	12	9
Montello		47	40	36	30	28	28	20	16	14	11
Tecoma		49	41	37	31	29	29	20½	17	14	12
Fallon		147½	126	104	93	81½	81	48	45½	34½	31½
Lahontan		143	122	100½	90½	79½	79½	47½	43½	34	30½
Churchill		161	137	113	102	88½	81	49½	48	35	34½
Dayton		167	142	127½	107	88½	81	49½	49	35½	35½
Mound House		168	143	127½	107	88½	81	49½	49½	35½	35½
Wabuska		166	141	121	107	88½	81	49½	48½	35½	35½
Schurz		169	144	127½	107	88½	81	50	49½	36	36
Thorne		171	146	127½	107	88½	81	50½	50	36½	36½
Laming		172	146½	127½	107	88½	81	51	50½	36½	36½
Mina		172½	147	127½	107	88½	81	51	50½	36½	36½
Topopah Junction		172½	147	127½	107	88½	81	51	50½	36½	36½
Candelaria		177½	152	132½	112	92½	83	53½	53	38½	38½
Queen		172½	147	127½	107	88½	81	51	50½	36½	36½

Between Wells, Nevada, and—	Class	1	2	3	4	5	A	B	C	D	E
Vardi		150	128	106	92	77	77	50	45	36	30
Reno		148	126	104	92	77	77	49½	44	35½	30
Sparks		148	126	104	92	77	77	49½	44	35½	30
Wadsworth		144	122	101	90	77	77	49½	43	35½	29
Fernley		141	120	99	88	77	77	48½	42	35	28
Hazen		138	117	97	86	77	77	48	41	34½	28
Parran		131	111	92	82	75	75	46½	39	33	26
Lovelock		124	106	87	78	71	71	44½	37	31	25
Nenasi		120	102	84	75	69	69	43½	36	30	24
Rye Patch		118	100	83	74	68	68	43	35	30	24
Imley		110	94	77	69	63	63	39½	33	28	22
Mill City		108	92	76	68	62	62	38½	32	27	22
Winnemucca		96	82	67	60	55	55	34	29	24	19
Golconda		90	77	63	56	52	52	31½	27	23	18
Battle Mountain		74	63	52	46	43	43	26½	22	19	15
Beowawe		57	48	42	37	34	34	20½	19	15	12
Palisade		51	43	39	32	30	30	20½	18	15	12
Carlin		47	40	36	30	28	28	20	16	14	11
Elko		39	33	29	25	23	23	17	14	12	9
Halleck		27	23	19	18	16	16	9½	9½	7½	7½
Deeth		18	16	14½	12	11½	11½	7	6½	5½	5½
Cobre		33	29	26	22	19	19	13	12	9½	9
Montello		39	33	29	25	23	23	17	14	12	9
Tecoma		43	36	33	28	26	26	18	15	13	10

RATE IN CENTS PER 100 POUNDS											
Between Wells, Nevada, and--	Class	1	2	3	4	5	A	B	C	D	E
Fallon	151	129	107	95	85	81	49	46	35	32	31
Lahontan	147	125	103	92	83	81	48	44	35	31	31
Churchill	165	140	116	104	88	81	49	49	35	35	35
Dayton	169	144	127	107	88	81	50	49	36	36	36
Mound House	170	145	127	107	88	81	50	50	36	36	36
Wabuska	168	143	124	107	88	81	49	49	35	35	35
Schurz	170	145	127	107	88	81	50	50	36	36	36
Thorne	172	146	127	107	88	81	51	50	36	36	36
Luning	172	147	127	107	88	81	51	50	36	36	36
Mina	172	147	127	107	88	81	51	50	36	36	36
Tonopah Junction	172	147	127	107	88	81	51	50	36	36	36
Candelaria	177	152	132	112	92	83	53	53	38	38	38
Queen	172	147	127	107	88	81	51	50	36	36	36
Between Cobre, Nevada, and--											
Verdi	154	128	111	92	77	77	50	47	36	32	32
Reno	154	128	109	92	77	77	50	47	36	31	31
Sparks	154	128	109	92	77	77	50	47	36	31	31
Wadsworth	152	128	106	92	77	77	50	46	36	30	30
Fernley	149	127	104	92	77	77	50	45	36	30	30
Hazen	147	125	103	92	77	77	49	44	35	29	29
Parran	141	120	99	88	77	77	48	42	35	29	29
Lovelock	133	113	98	83	76	76	46	40	33	27	27
Nenzel	130	111	91	81	75	75	46	39	33	26	26
Rye Patch	128	109	90	80	74	74	45	38	32	26	26
Imlay	123	105	86	77	71	71	44	37	31	25	25
Mill City	123	106	88	77	71	71	44	37	31	25	25
Winnemucca	112	95	78	70	64	64	40	34	28	22	22
Golconda	104	88	73	65	60	60	38	31	26	21	21
Battle Mountain	88	75	62	55	51	51	31	26	22	18	18
Beowawe	76	65	53	48	44	44	28	23	19	15	15
Palisade	68	58	48	43	38	38	23	20	17	14	14
Carlin	63	53	44	40	36	36	21	19	16	13	13
Elko	53	45	40	34	32	32	20	18	15	12	12
Halleck	45	38	34	29	27	27	19	16	13	11	11
Deeth	39	33	29	25	23	23	17	14	12	9	9
Wells	33	29	26	22	19	19	13	12	9	8	8
Montello	18	16	14	12	11	11	7	6	5	4	4
Tecoma	22	19	17	14	13	13	8	7	6	5	5
Fallon	160	137	113	101	85	81	50	49	36	33	33
Lahontan	156	133	109	98	83	81	50	49	36	32	32
Churchill	170	145	127	107	88	81	50	50	36	36	36
Dayton	171	146	127	107	88	81	50	50	36	36	36
Mound House	171	146	127	107	88	81	50	50	36	36	36
Wabuska	171	146	127	107	88	81	50	50	36	36	36
Schurz	172	146	127	107	88	81	51	50	36	36	36
Thorne	172	147	127	107	88	81	51	50	36	36	36
Luning	172	147	127	107	88	81	51	50	36	36	36
Mina	172	147	127	107	88	81	51	50	36	36	36
Tonopah Junction	172	147	127	107	88	81	51	50	36	36	36
Candelaria	177	152	132	112	92	88	50	53	38	38	38
Queen	172	147	127	107	88	81	51	50	36	36	36
Between Montello, Nevada, and--											
Verdi	154	128	113	92	77	77	51	48	36	3	3
Reno	154	128	111	92	77	77	51	48	36	3	3
Sparks	154	128	111	92	77	77	51	48	36	3	3
Wadsworth	154	128	109	92	77	77	50	47	36	3	3
Fernley	152	128	106	92	77	77	50	46	36	3	3
Hazen	150	128	106	92	77	77	50	45	36	3	3
Parran	145	123	102	91	77	77	49	44	35	2	2
Lovelock	138	117	97	86	77	77	48	41	34	2	2
Nenzel	134	114	94	84	77	77	47	40	33	2	2
Rye Patch	131	111	92	82	75	75	46	39	33	2	2
Imlay	128	109	90	80	74	74	45	38	32	2	2
Mill City	126	107	88	79	72	72	45	38	32	2	2
Winnemucca	118	100	83	74	68	68	43	35	30	2	2
Golconda	112	95	78	70	64	64	40	34	28	2	2
Battle Mountain	96	82	67	60	55	55	34	29	24	2	2
Beowawe	82	70	57	51	47	47	28	25	21	2	2
Palisade	76	65	53	48	44	44	26	23	19	2	2
Carlin	72	61	50	45	41	41	25	22	18	2	2
Elko	60	51	42	38	35	35	21	19	15	2	2
Halleck	51	43	39	32	30	30	20	18	15	2	2
Deeth	47	40	36	30	28	28	20	16	14	2	2
Wells	39	33	29	25	23	23	17	14	12	2	2
Cobre	18	16	14	12	11	11	7	6	5	2	2
Tecoma	9	8	6	6	6	6	4	3	3	2	2
Fallon	163	140	115	101	85	81	50	50	36	36	36
Lahontan	159	136	111	98	83	81	50	48	36	36	36
Churchill	171	146	124	107	88	81	50	50	36	36	36
Dayton	172	146	127	107	88	81	51	50	36	36	36
Mound House	172	147	127	107	88	81	51	50	36	36	36
Wabuska	171	146	127	107	88	81	50	50	36	36	36
Schurz	172	147	127	107	88	81	51	50	36	36	36

RATE IN CENTS PER 100 POUNDS

Between	Class	1	2	3	4	5	A	B	C	D	E
Between Montello, Nevada, and—											
Thorne	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Luning	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Mina	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Tonopah Junction	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Candelaria	177½	152	132½	112	92½	83	53½	53	38½	38½	38½
Queen	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Between, Tecoma, Nevada, and—											
Verdi	154	128	118	92	77	77	51	49	36½	32	32
Reno	154	128	112	92	77	77	51	48	36½	32	32
Sparks	154	128	112	92	77	77	51	48	36½	32	32
Wadsworth	154	128	109	92	77	77	50½	47	36½	31	31
Fernley	154	128	108	92	77	77	50½	46	36½	31	31
Hazen	151	128	106	92	77	77	50½	46	36½	30	30
Parran	147	125	108	92	77	77	49½	44	35½	29	29
Lovelock	139	118	97	87	77	77	48½	42	34½	28	28
Nenzel	136	116	96	86	77	77	47½	41	34	27	27
Rye Patch	134	114	94	84	77	77	47	40	33½	27	27
Imlay	129	110	90	81	74	74	46½	39	32	26	26
Mill City	128	109	90	80	74	74	46½	38	32	26	26
Winnemucca	121	103	85	76	70	70	44	36	30	24	24
Golconda	114	97	80	71	66	66	41	34	29	23	23
Battle Mountain	98	83	69	61	56	56	36	29	25	20	20
Beowawe	84	71	59	53	48	48	29½	25	21	17	17
Palisade	78	66	55	49	45	45	27½	23	20	16	16
Carlin	74	63	52	46	43	43	26½	22	19	15	15
Elko	66	56	46	41	37	37	22½	20	17	13	13
Halleck	55	46	41	36	33	33	20½	19	15	12	12
Deeth	49	41	37	31	29	29	20½	17	14	12	12
Wells	43	36	33	28	26	26	18	15	13	10	10
Cobre	22½	19	17	14	13	13	8	7½	6½	6½	6½
Montello	9	8	6½	6½	6	6	4½	3½	3½	3½	3½
Fallon	164½	140	116	101	85	81	50½	50	36½	34½	34½
Labontan	160	136	112½	98½	83	81	50½	48½	36½	33½	33½
Churchill	171½	146	125	107	88½	81	50½	50½	36½	36½	36½
Dayton	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Mound House	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Wabuska	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Schurz	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Thorne	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Luning	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Mina	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Tonopah Junction	172½	147	127½	107	88½	81	51	50½	36½	36½	36½
Candelaria	177½	152	132½	112	92½	83	53½	53	38½	38½	38½
Queen	172½	147	127½	107	88½	81	51	50½	36½	36½	36½

On June 26, 1913, and July 24, 1913, supplemental orders were entered, which read as follows:

SUPPLEMENTAL ORDER

By the Commission:

It appearing to the Commission that there are certain errors in Schedule A, annexed to and made a part of the order in this proceeding on rehearing, entered June 18, 1913, it is, therefore,

Further ordered: That the rates set forth in the schedule hereto annexed, marked "Schedule B" and made a part of this supplemental order, be substituted for the rates named between the same points in Schedule A, annexed to and made a part of the order entered on June 18, 1913; the remaining rates named in said Schedule A to be wholly unaffected by this supplemental order.

It is further ordered: That the rates prescribed by this supplemental order shall be made effective on or before July 1, 1913.

[SEAL]

Dated June 26, 1913.

RAILROAD COMMISSION OF NEVADA,

By E. H. WALKER, *Secretary*.

SCHEDULE B

RATE IN CENTS PER 100 POUNDS

Between—	Class	1	2	3	4	5	A	B	C	D	E
Sparks and Queen	106	92	76	68	62	62	38½	32	27	22	22
Fernley and Labontan	22½	19	17	14	13	13	8	7½	6½	6½	6½
Fernley and Candelaria	100	85	70	63	58	58	32½	30	23½	20	20
Fernley and Luning	86	73	60	54	49	49	26½	25½	19	17	17
Hazen and Winnemucca	72	61	50	45	41	41	25½	22	18	14	14
Hazen and Halleck	130	111	91	81	69	69	46½	39	33	26	26
Lovelock and Candelaria	135	118	101	90	82	77	39	38½	28½	28½	28½
Imlay and Mound House	106½	83	79	69½	63	63	28	27½	20½	20½	20½
Imlay and Luning	133	116	102	91	79	76	37½	37	27½	27½	27½
Imlay and Candelaria	150	129	112	100	87	79	45½	45	32½	32½	32½
Mill City and Fallon	70½	60	52	46	42	42	22½	22½	17	16½	16½
Mill City and Thorne	128	112	97	86	77	74	35½	35	26½	26½	26½
Halleck and Golconda	78	66	55	49	45	45	27½	23	20	16	16
Cobre and Candelaria	177½	152	132½	112	92½	83	53½	53	38½	38½	38½
Tecoma and Wabuska	172	146½	127½	107	88½	81	51	50½	36½	36½	36½

SECOND SUPPLEMENTAL ORDER

By the Commission:

It appearing to the Commission that there are certain errors in Schedules A and B, annexed to and made parts of the former orders in this proceeding, entered June 18, 1913, and June 26, 1913, it is, therefore,

Further ordered: That the rates set forth in the schedule hereto annexed, marked "Schedule C," and made a part of this second supplemental order, be substituted for the rates named between the same points in Schedules A and B, annexed to and made parts of the orders entered on June 18, 1913, and June 26, 1913; the remaining rates named in said Schedules A and B to be wholly unaffected by this second supplemental order.

It is further ordered: That the rates prescribed by this second supplemental order shall be made effective on or before August 15, 1913.

[SEAL]
Dated July 24, 1913.

RAILROAD COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary.*

SCHEDULE C
RATE IN CENTS PER 100 POUNDS

Between—	1	2	3	4	5	A	B	C	D	E
Class										
Imlay and Fallon	70½	60	52	46	42	42	21½	21½	16½	16½
Imlay and Candelaria	150	129	112	100	87	79	45½	45	32	32
Winnemucca and Cobre	112	98	78	70	62	62	40	34	28	22
Winnemucca and Montello	118	100	83	74	62	62	43	35	30	24
Winnemucca and Tecoma	121	103	85	74	62	62	44	36	30	24
Golconda and Cobre	104	88	78	65	57½	57½	38½	31	26	22
Golconda and Montello	112	96	78	69	57½	57½	40	34	28	22
Golconda and Tecoma	114	96	80	69	57½	57½	41	34	28	22
Halleck and Wabuska	164	140	118	107	88½	81	48½	43	35	35
Cobre and Winnemucca	112	96	78	70	62	62	40	34	28	22
Cobre and Golconda	104	88	78	65	57½	57½	36½	31	26	21
Cobre and Lahontan	156	133	109½	98½	83	81	50	47½	36	32
Cobre and Churchill	170½	145	124	107	88½	81	50½	50	36½	36½
Montello and Winnemucca	118	100	83	74	62	62	43	35	30	24
Montello and Golconda	112	96	78	69	57½	57½	40	34	28	22
Tecoma and Winnemucca	121	103	86	74	62	62½	44	36	30	24
Tecoma and Golconda	114	96	80	69	57½	57½	41	34	28	22

The rates as prescribed in the Commission's order of June 18, 1913, and its supplemental order of June 26, 1913, were put into effect July 1, 1913, and, upon stipulation being filed by the Commission's attorneys and counsel for the Southern Pacific Company, the cases pending in the United States Court were dismissed.

The reductions made effective in this order amounted to 25 per cent on freight moving under class rates over the Southern Pacific Company's lines in Nevada, or approximately \$30,000 per year. The reductions in the rates from Reno to points south on the Nevada and California Branch of the Southern Pacific Company, and which automatically reduced the rates to Tonopah and Goldfield points, practically opened a new market to the merchants of Reno, as heretofore they were unable to meet California competition to those points, except on a very few commodities, for the reason that the freight rates were adjusted in such manner that California shippers had a great advantage. Under the new adjustment, the city of Reno is given an even chance with the California cities, which opens a large field for new business.

Case No. 155—Passenger Rates on the Southern Pacific Company in Nevada.

This case, entitled *Railroad Commission of Nevada v. Southern Pacific Company*, was decided by the Commission November 9, 1912, Chairman Bartine dissenting, ordering a reduction in the defendant company's passenger fares from 5 cents per mile on the Nevada and California Railway Branch and 4 cents per mile on the main line in Nevada, to a flat 3-cent per mile rate on the company's system in Nevada, with the exception of that portion of the same which is narrow-gage, running from Mina south to the California state line. The new rates were ordered effective on or before February 25, 1913.

Prior to the time the Commission's order should have taken effect the Southern Pacific Company brought proceedings in the United States District Court of Nevada to have the order set aside, and a temporary restraining order was issued to the Commission by the court, pending the hearing on the motion for an injunction *pendente lite*.

The case came up before the court, Judge Farrington presiding, on the motion for an injunction *pendente lite*. The Commission was represented by Attorney-General Thatcher, and C. W. Durbrow, H. C. Booth, and G. S. Brown appeared for the Southern Pacific Company.

The court entered its opinion and order on the motion in July, 1913, and issued an injunction *pendente lite* against the Commission, on the grounds that the order was broader than the issues, and that material data had been considered on which the Commission's order was largely based, which had not been admitted as evidence.

The court's opinion and order read as follows:

[No. A-2]

• IN THE DISTRICT COURT OF THE UNITED STATES IN AND FOR
THE DISTRICT OF NEVADA

SOUTHERN PACIFIC COMPANY (a Corporation), *Complainant*,

v.

H. F. BARTINE, ET AL., *Defendants*.

Appearances:

C. W. Durbrow, Henley C. Booth, and George S. Brown (W. F. Herrin, of Counsel), Solicitors for Complainant.

Geo. B. Thatcher, Attorney-General of the State of Nevada, Solicitor for Defendants.

OPINION

FARRINGTON, *District Judge*:

The Southern Pacific Company has filed its bill in this court to enjoin the enforcement of an order made by the Railroad Commission of Nevada, reducing local one-way passenger fares from 4 cents a mile on its main line, and from 5 cents a mile on its standard-gage branch lines within this State, to 3 cents a mile.

Complainant pleads that the order directly, and by its necessary operation, interferes with and burdens interstate commerce; that it reduces the revenues of the company to such an extent as to be confiscatory, and is arbitrary, unjust and unreasonable; that the statute under which the order was made is unconstitutional because of the excessive penalties imposed upon railroad companies failing to obey orders of the Commission; that the order is beyond the issues raised in the citation and framed by the Commission at the opening of the proceedings held before that body; and, finally, the order itself is not supported by, and is contrary to the evidence.

It is further contended that the order, if enforced, will work irreparable injury to complainant in this, it will require at least \$5,500 to print tariffs to comply with the order of the Commission, the orders of the Interstate Commerce Commission, and the interstate commerce law; that it will require the Southern Pacific Company to reduce its interstate rates; that the company will be compelled to arrange divisions with its eastern connections, and, in the event the order is not sustained on final hearing, the company will be obliged to appear before the Interstate Commerce Commission, and ask leave to raise the interstate rates to their former basis; and that it will be impossible to recover from passengers the difference between the rates now charged and the rates which they will pay under the order.

As to the objection that the penalties prescribed by the statute are excessive, complainant declares that it relies thereon only as it bears on the claim of irreparable injury.

It is admitted that the question of interference with interstate commerce is foreclosed by the recent decision of the Supreme Court in the Minnesota rate case; that the only showing of confiscation set out in the bill, or which complainant is prepared to make, is by a method which in the same decision has been disapproved. The questions of confiscation and interference with interstate commerce must therefore for the present be laid aside.

Complainant now contends that, notwithstanding the elimination of all questions of confiscation and interference with interstate commerce, it is still entitled to an injunction *pendente lite* because the order is void, in that it is beyond the issues defined by the Commission, and is unsupported by and contrary to the evidence which was before the Commission and which they could properly take into consideration.

The proceedings were commenced by the Commission on its own initiative. There were no formal pleadings. A citation was issued and served on the Southern Pacific Company. So far as material it reads as follows:

It appearing to this Commission that your entire schedule of intrastate passenger fares, within the State of Nevada, may be unreasonable and unjustly discriminatory, and that investigation thereof should be made, you are hereby notified that upon the 12th day of July, 1911, at 11 o'clock a. m., an investigation of said schedule of rates and the whole thereof will be had for the purpose of determining the reasonableness of said fares and rates and whether they are unjustly discriminatory. You are therefore formally cited to appear at said investigation and take such part therein as you may deem proper.

This proceeding will be had under the provisions of subdivision b of section 12 of the railroad commission law of the State of Nevada.

At the hearing the issues were framed and defined by the Commission in a colloquy which reads thus:

Mr. Squires: * * * We are to combat the proposition that a 3-cent fare is what is in your mind.

Chairman Bartine: And also understand that we are not formally committed to that proposition.

Mr. Squires: We are to meet the proposition that a 3-cent rate on the main line of the Southern Pacific would be, in our view, unfair, and assuming that the Commission desires to get information upon that subject.

Chairman Bartine: Of course you also understand, Mr. Squires, that even if we had fixed upon a 3-cent rate absolutely, we should not feel bound by that. If the investigation showed that a 3½-cent rate would be fair, you understand. * * *

Mr. Squires: We will direct our testimony to that point, that a 3-cent rate is the one desired by the Commission. If Mr. Fee will be sworn—

Chairman Bartine: One moment. Commissioner Shaughnessy suggests that inasmuch as the citation refers to your entire schedule of passenger fares in this State, that of course would include the Nevada and California where you have a 5-cent schedule. You should direct your evidence in showing why that 5-cent rate should not be reduced to 4.

Mr. Squires: That may require the compilation of some further statistics. Mr. Fee will, of course, go over that in his testimony. * * * Q. I will ask you now to state to the Commission your views with reference to that situation, keeping in mind that the proposition here is to reduce the passenger fares on the main line and on the Nevada and California line to 3 cents per mile. State it in your own way and follow the situation out logically as you choose for their information.

Chairman Bartine: That is, 3 cents on the main line and 4 cents on the Nevada and California.

Mr. Squires: Three cents on the main line and 4 cents on the Nevada and California.

Thus the Southern Pacific Company was required to show why its rates should not be reduced on all its intrastate passenger business conducted over the main line from a 4-cent to a 3-cent rate; and over the Nevada and California line from a 5-cent to a 4-cent rate. That was the issue framed by the Commission itself. Nowhere in the record prior to the entry of the order complained of is there a suggestion of any other, or that any reduction on branch lines below a 4-cent-per-mile rate was contemplated, or that branch-line rates below 4 cents per mile were deemed to be unreasonable. The order of the Commission, however, rendered January 24, 1913, required the company to "collect and receive for the transportation of local one-way passengers between points on the main line and the standard-gage branch lines of the Southern Pacific Company within Nevada, local one-way passenger fares that will not exceed 3 cents a mile."

The hearing, both as to the law and evidence, was limited to the issue thus framed. No valid order could be broader than that issue. One holding the contrary might with equal propriety uphold a judgment for \$500 where an indebtedness of but \$400 was alleged. The order of the Commission was broader than the issue. (*Oregon Navigation Co. v. Fairchild*, 224 U. S. 510, 524.)

On the hearing before the Commission there was no testimony except that of the carriers. The Southern Pacific Company contended that volume of traffic and density of population were the controlling factors in fixing intrastate passenger rates, and to the application of this idea its testimony was mainly directed.

This contention was exhaustively investigated by the Commission, and in attempting to refute it a considerable amount of data gathered from statistics published under the authority of the Interstate Commerce Commission, but not introduced in evidence, was made use of by the Commission, and is recited in its opinion. This data was clearly relevant and material, had it been admitted as evidence.

The act of fixing a passenger rate is a legislative function, and this is true of the rate in question. The powers of the Commission, however, are not so broad as those of the Legislature. When a rate is fixed by the Railroad Commission of Nevada, it must be in the manner pointed out by the statute. The Commission has no power to act in any other way; it has no authority save that conferred by the statute.

Under the Nevada statute a new rate can be fixed and ordered by the Commission only after the old rate has been investigated and found to be unreasonable, or unjustly discriminatory. Such an investigation must be preceded by notice, and the notice must specify the rate to be investigated. The burden is upon the party attacking any established rate to show that it is unreasonable. The carrier is entitled to be heard at the time and place fixed for the investigation, to have process to compel the attendance of witnesses, and to introduce evidence in explanation or rebuttal of that offered. If the Commission may consider data which never has been introduced in evidence, and of which the carrier has received no notice, how can it be either explained or refuted? And of what avail is the right of cross-examination and the right to offer testimony on matters material to the investigation? Under such circumstances an investigation is of little use, and it is far from conforming to our ideals of either judicial or fair investigation.

In this connection I cannot do better than to quote the language of Mr. Justice Lamar in the case of *Interstate Commerce Commission v. Louisville and Nashville R. R. Co.*, 227 U. S. 88, 92:

Under the statute the carrier retains the primary right to make rates, but if, after hearing, they are shown to be unreasonable, the Commission may set them aside and require the substitution of just for unjust charges. The Commission's right to act depends upon the existence of this fact, and if there was no evidence to show that the rates were unreasonable, there was no jurisdiction to make the order. (*Int. Com. Comm. v. Northern Pacific Ry.*, 216 U. S. 538, 544.) In a case like the present the courts will not review the Commission's conclusions of fact (*Int. Com. Comm. v. Delaware Ry.*, 220 U. S. 235, 251) by passing upon the credibility of witnesses, or conflicts in the testimony. But the legal effect of evidence is a question of law. A finding without evidence is beyond the power of the Commission. An order based thereon is contrary to law and must, in the language of the statute, be set aside by a court of competent jurisdiction. (36 Stat. 551.)

The Government further insists that the commerce act (36 Stat. 743) requires the Commission to obtain information necessary to enable it to perform the duties and carry out the objects for which it was created, and having been given legislative power to make rates it can act, as could Congress, on such information, and therefore its findings must be presumed to have been supported by such information, even though not formally proved at the hearing. But such a construction would nullify the right to a hearing, for manifestly there is no hearing when the party does not know what evidence is offered or considered and is not given an opportunity to test, explain or refute. The information gathered under the provisions of section 12 may be used as a basis for instituting prosecutions for violation of the law, and for many other purposes, but is not available, as such, in cases where the party is entitled to a hearing. The Commission is an administrative body and, even where it acts in a quasi-judicial capacity, is not limited by the strict rules as to the admissibility of evidence, which prevail in suits between private parties. (*Int. Com. Comm. v. Baird*, 194 U. S. 25.) But the more liberal the practice in admitting testimony, the more imperative the obligation to preserve the essential rules of evidence by which rights are asserted or defended. In such cases the Commissioners cannot act upon their own information as could jurors in primitive days. All parties must be fully apprised of the evidence submitted or to be considered, and must be given opportunity to cross-examine witnesses, to inspect documents and to offer evidence in explanation or rebuttal. In no other way can a party maintain its rights or make its defense. In no other way can it test the sufficiency of the facts to support the finding; for otherwise, even though that it appeared that the order was without evidence, the manifest deficiency could always be explained on the theory that the Commission had before it extraneous unknown, but presumptively sufficient, information to support the finding. (*U. S. v. Baltimore R. R.*, 226 U. S. 14.)

It is unnecessary to consider the objection that the order is not supported by the evidence. The order is clearly broader than the issue, and material data considered by the Commission, and on which its order is largely based, was not admitted in evidence. For this reason, without passing on the reasonableness or

the unreasonableness of the rates fixed, and because the evidence sufficiently established the probability of irreparable injury, the injunction now in force will be continued pending the suit.

Since the rendering of the foregoing opinion by the court, the Commission has rescinded the original order and the case in court has been dismissed.

Case No. 170—Minimum Weights on Hay, Carloads, Alvord, Cal., to Mina, Nevada.

This case, entitled *The Mina Mercantile Company v. Southern Pacific Company*, is fully set forth in the Commission's Fifth Annual Report, and during the year 1913 complainant secured reparation on the shipments referred to.

Case No. 181—Switching Charges at Goldfield.

This case, entitled *Petition of the Las Vegas and Tonopah Railroad Company and Tonopah and Goldfield Railroad Company*, the details of which are fully set forth in the Commission's Fifth Annual Report, is still pending before the Commission at the time of closing this report.

Case No. 194—Switching Charges at Thompson.

Case No. 194, entitled *Mason Valley Mines Company v. Nevada Copper Belt Railroad Company*, which was still pending at the time of closing the Commission's Fifth Annual Report, has been consolidated with Case No. 225, which bears the same title and relates to the same subject.

Case No. 202—Various Commodity Rates Between Points on the Tonopah and Goldfield Railroad.

Case No. 202, entitled *Railroad Commission of Nevada v. Tonopah and Goldfield Railroad Company*, the details of which are fully set forth in the Fifth Annual Report of the Commission, was disposed of during the year 1913, the defendant company publishing and making effective a new tariff in accordance with the Commission's requirements.

Case No. 204—Cost of Making Improvements on Spur Track of Nevada Gas Company, at Tonopah, Nevada.

This case, entitled *Nevada Gas Company v. Tonopah and Goldfield Railroad Company*, the details of which are fully set forth in the Commission's Fifth Annual Report, is still pending at the time of closing this report.

Case No. 205—Overcharge on Trunk Shipped from Juab, Utah, to Yerington, Nevada.

Case No. 205, entitled *George Parker v. San Pedro, Los Angeles and Salt Lake Railroad Company*, the details of which are fully set forth in the Commission's Fifth Annual Report, was dismissed during the year 1913, for the reason that the Commission's correspondence addressed to the complainant was not answered.

Case No. 211—Coal Rates, Utah and Wyoming Points to Points in Nevada.

This case, entitled *Railroad Commission of Nevada v. Southern Pacific Company, et al.*, details of which are set forth in the Commission's Fifth Annual Report, is still pending, no further action having been taken.

Case No. 225—Switching Rates on the Nevada Copper Belt Railroad Between Wabuska and Thompson.

Case No. 225, entitled *Mason Valley Mines Company v. Nevada Copper*

Belt Railroad Company, had just been brought before the Commission at the time of closing its Fifth Annual Report.

Citation was issued under date of January 22, 1913, to the defendant company, requiring it to answer the complaint on or before February 10, 1913. Before the answer was filed, several motions and demurrers were brought before the Commission by defendant, which were overruled. The answer was received by the Commission March 13, 1913, time for filing the same having been extended to that date.

The hearing in this case took place before the Commission at Carson City, April 10 to April 16, 1913, both dates inclusive. Appearances were made on behalf of complainant by Messrs. Brown and Belford, attorneys; and Henry I. Moore, attorney, represented the defendant company. Testimony was taken on behalf of complainant and defendant, and at the close of the hearing time was allowed for the filing of briefs.

On November 25, 1913, the Commission received complainant's brief, and defendant was given until January 15, 1914, in which to file its reply brief.

At the time of closing this report the case is still pending.

CASES FILED WITH THE RAILROAD COMMISSION OF NEVADA DURING 1913

Cases No. 226—Unloading of Cars.

December 14, 1912. Complaint filed by J. E. Sexton, General Manager of the Nevada Transportation Company, lessee of the Eureka Nevada Railway, against the United States Smelting Company, asking that the defendant be required to unload five or six cars which had been loaded with ore just prior to the time the railroad had been washed out in 1910 and had never been unloaded by defendant, which held bills of lading issued by the Eureka and Palisade Railway Company covering the same, and insisted that the Nevada Transportation Company forward to destination at rates that were in effect at time shipments were offered. Complainant contended that the shipments could not be handled.

Under date of January 7, 1913, the Commission advised complainant that it was without legal authority in the matter, and that his proper remedy was in a court of competent jurisdiction.

Case No. 227—Rate on Paper Lamp-Shades, Less than Carload, New York to Reno.

January 8, 1913. Complaint of the Nevada Machinery and Electric Company against the Southern Pacific Company, alleging overcharge on shipment of paper lamp-shades, less than carload, New York to Reno weight 120 pounds, upon which charges of \$12.85 had been assessed.

Under date of January 9, 1913, complainant was advised that the correct rate on the commodity, not otherwise specified, was \$10.50 per cwt., while the rate applicable if the same had been nested or folded flat would have been \$7 per cwt.

Under date of January 17, 1913, complainant advised the Commission that a small portion of the shipment was not nested, and correct rate had been applied.

Case No. 228—Station Service at Schurz.

December 28, 1912. Complaint filed by Charles Shickle against the Southern Pacific Company, alleging that the station waiting-room, at Schurz, Nevada, was kept without a stove in it for the purpose of keep-

ing the room warm, and that passengers waiting for night trains often suffered from the cold.

The Commission took this matter up with with the proper officials of the defendant company, and was assured that the matter would be immediately remedied. Complainant was so advised under date of January 18, 1913.

Case No. 229—Passenger Train Service on the Nevada Northern Railway.

January 20, 1913. Complaint filed by G. L. Sheldon and A. D. Chamberlin against the Nevada Northern Railway Company, alleging inadequate passenger train service between suburban points in the Ely district.

After corresponding with the officials of the defendant company, the Commission was informed under date of February 6, 1913, that the suburban passenger train service would be immediately adjusted so as to give the people of the Ely district the service they desired. Complainants were so advised, and under date of March 6, 1913, notified the Commission that the adjustment in service made by defendant was entirely satisfactory.

Case No. 230—Ore Rates from Points on the Nevada Northern Railway to the Salt Lake Smelters.

January 23, 1913. Complaint filed by James Cronon, F. B. Becker, C. E. Smith, and O. H. Paulson against the Nevada Northern Railway Company, Southern Pacific Company, Oregon Short Line Railroad Company, Western Pacific Railway Company, Denver and Rio Grande Railroad Company, San Pedro, Los Angeles and Salt Lake Railroad Company, and Tooele Valley Railroad Company, alleging unreasonable and exorbitant rates charged for the transportation of ores from the Ely district to various smelter points located near Salt Lake City, Utah.

After a careful study of the question of the rates involved in this proceeding, the Commission, under date of February 10, 1913, addressed letters to the traffic managers of the defendant companies, suggesting that certain through joint rates on ore be established, in lieu of the rates in effect. The carriers were unwilling to establish the rates suggested by the Commission, and requested to appear before it for the purpose of a conference looking toward an adjustment of the case.

This conference was held on April 8, 1913, appearances being made on behalf of the Southern Pacific Company, Nevada Northern Railway Company, and Western Pacific Railway Company. At this conference, the railroads offered to make certain adjustments in the rates applying on ores of a grade higher than \$30 in value per ton, but were unwilling to adjust the rates on ores of a lower value. The commission refused to accept the adjustments proposed by the carriers, as the complaint referred particularly to the rates on ores of a low value. At the conclusion of the conference it was agreed that the question of the amount of low-grade tonnage of ore in the Ely district would be investigated by the Commission and the matter taken up further at a later date.

The Commission addressed letters to a number of mining men in the Ely district with a view to getting information regarding this tonnage, but up to the closing of this report no information of a definite nature has been received, and the case has not been carried further.

Case No. 231—Station Service at Yerington.

January 16, 1913. Complaint of N. W. Willis, District Attorney of Lyon County, against the Nevada Copper Belt Railroad Company, alleging unsatisfactory station service at Yerington, Nevada.

From the statement of complainant in this action it appeared that the defendant company had a passenger train schedule by which two trains stopped at Yerington station during the night, one train north-bound due about 12:15, and one south-bound, due at 2 a. m. It further appeared, from complainant's statement, that the depot at Yerington was not provided with a fire for the comfort of passengers waiting for trains, or other parties waiting to meet incoming passengers, and they were often forced to wait outside the depot, the same being locked.

The Commission took the question up with the officials of the defendant company, and under date of January 31, 1913, was informed that the company had arranged to keep the depot open at night, with a fire therein for the comfort of parties waiting for trains. Complainant was so notified, and under date of January 31, 1913, the Commission was advised that defendant had adjusted the matter satisfactorily.

Case No. 232—Overcharge on Shipment of One Motorcycle, Los Angeles, Cal., to Tonopah, Nevada.

February 8, 1913. Complaint received from Arthur C. Smith against the Tonopah and Goldfield Railroad Company, alleging overcharges on shipment of one crated motorcycle, forwarded from Los Angeles, Cal., January 31, 1913, consigned to complainant at Tonopah, Nevada.

Upon investigation it was found that charges had been assessed on the shipment on the basis of two and one-half times the first-class rate, or \$6.25 per cwt. It was found further that the correct classification was one and one-half times the first-class rate, a reduction in the same having been made in Supplement 12 to Western Classification No. 50, effective January 15, 1913, making the correct charges applicable \$3.75 per cwt.

The question was taken up with the officials of the defendant company, and under date of February 13, 1913, the Commission was advised that refund of \$7 would immediately be made to complainant.

Under date of February 25, 1913, the complainant informed this Commission that the matter had been satisfactorily adjusted.

Case No. 233—Telephone Service in Reno.

February 21, 1913. Complaint received from O. H. Mack against the Bell Telephone Company of Nevada, alleging that a representative of the defendant company had called upon him and stated that he would be compelled to have a two-party line service installed in his place of business, whether he desired it or not, such two-party line service requiring a higher monthly rental charge than complainant was then paying.

The question was taken up personally with the officials of the defendant company, who denied that complainant had been told that it would be compelled to install the two-party line service, he being entitled to demand the service which was being rendered at that time. Case was therefore dismissed, the adjustment being satisfactory to complainant.

Case No. 234—Rate on Lumber, Carloads, Palisade to Eureka.

March 2, 1913. Complaint received from P. H. Hjul against the Nevada Transportation Company, lessee of the Eureka-Nevada Railway

Company, alleging overcharge on carload shipment of lumber moving from Palisade to Eureka, point of origin, Truckee, Cal.

The shipment in question consisted of 32,180 pounds of rough lumber and shingles, 1,630 pounds of doors and windows, and 4,170 pounds of surfaced lumber. A rate of 35 cents per cwt. had been applied on the rough lumber and shingles, and a rate of \$1 per cwt. on the doors, windows, and surfaced lumber.

Under date of March 6, 1913, the Commission ruled that the correct application of rates was 35 cents per cwt. on the rough lumber, shingles, and surfaced lumber, and \$1 per cwt. on the doors and windows. The defendant company was advised to make an adjustment accordingly. The Commission was advised that such adjustment would be made, but on November 7, 1913, complainant notified the Commission that refund had not been made, the reasons given by defendant being that the shipment was interstate in character and that if adjustment was made by the company it would violate the rulings of the Interstate Commerce Commission.

On November 14, 1913, the Commission advised the defendant company that in its opinion there would be no violation of the Interstate Commerce Commission rulings in making the refund, and asked for an immediate adjustment of the case.

Case No. 235—Interchange Tracks Between Southern Pacific Company and Western Pacific Railway Company at Elko.

March 6, 1913. Complaint filed by J. B. Fitzgerald, Assemblyman from Elko County, on behalf of the citizens of Elko against the Southern Pacific Company and Western Pacific Railway Company, asking that defendants be required to establish and maintain interchange tracks at that point.

This matter was immediately taken up with the officials of the two defendant companies, who replied, stating that they were unwilling to establish an interchange track at Elko, on the grounds that business conditions did not warrant the construction of such track at that point.

Later during the year the Commission took the same question up with the two companies under Case No. 253, asking them to establish interchange tracks at Elko, Winnemucca, and Wells, and details regarding the same will be found under that case-number in this report.

Case No. 236—Weight on Shipment of Lumber, Newberg, Oreg., to Ely, Nevada.

March 28, 1913. Complaint received from the Ely Lumber and Coal Company against the Southern Pacific Company and the Nevada Northern Railway Company, alleging overweight on shipment of one carload of lumber moving from Newberg, Oreg., to Ely, Nevada.

This shipment consisted of 24,000 feet of lumber, the net weight upon which charges were assessed being 86,000 pounds, less 500 pounds dunnage, or 85,500 pounds. Complainant contended that charges should have been assessed on the basis of 3,300 pounds to the thousand feet, or a gross weight of 79,200 pounds.

Upon investigation the Commission found that the gross weight of the car in which the shipment was carried was 120,000 pounds, and that the tare weight of the car was 34,000 pounds, and that therefore the actual weight of the lumber amounted to 86,000 pounds. The Commission considered that the correct weight had been applied by the carriers,

as actual weight of shipments must govern except in cases where it is impossible to have cars weighed. Case was therefore dismissed.

Case No. 236½—Rate on Brick, Carloads, Carson City to Wabuska.

March 18, 1913. Complaint received from the Carson Brick Company against the Virginia and Truckee Railway and the Southern Pacific Company, alleging unreasonable rate on brick in carload lots from Carson City to Wabuska, and asking that reasonable rates be established.

This case was taken up informally with the two defendant carriers and the Nevada Copper Belt Railroad Company, asking that a through rate of \$1.70 per ton be established from Carson City to Yerington, and a through rate of \$1.10 per ton be established from Carson City to Wabuska.

After some correspondence, the carriers agreed to establish a rate of \$1.35 per ton, Carson City to Wabuska, a reduction of \$2.22½ per ton from the rate in effect, which was \$3.57½ per ton. The reduction was made effective May 8, 1913. (See Case No. 246.)

Case No. 237—Lumber Rates, California Points to Elko, Nevada.

March 31, 1913. Complaint received from J. A. McBride against the Southern Pacific Company, protesting against increases in lumber rates proposed by the defendant company from lumber-producing points in California to Elko, which had been suspended by the Interstate Commerce Commission to take effect on July 19, 1913, instead of March 22, 1913, and asking this Commission to take the case before the Interstate Commerce Commission, if necessary.

Upon investigation it was found that the increases proposed by the defendant company did not affect Elko or other points on the main line of the Southern Pacific Company in Nevada, with the exception of Reno and points west to the state line.

Complainant was so advised, and under date of May 5, 1913, withdrew his complaint.

Case No. 238—Damages to Baggage En Route, New York, N. Y., to Reno, Nevada.

April 1, 1913. Complaint received from Mrs. Kate Libbey against the Southern Pacific Company, alleging damages to the extent of \$155 to contents of trunks forwarded by baggage, New York, N. Y., to Reno.

Upon investigation it was found that the baggage had been damaged by fire, having evidently been placed too close to a stove or other heating apparatus. The carriers handling the baggage were unable to check any damage to the same, and the local agent's office in Reno had a record of delivering the baggage in good order to an expressman. As representatives of the Southern Pacific Company were not called upon to make an investigation of the damage until one week after the delivery of the shipment at Reno, the carriers contended that the trunks must have been damaged during the intervening period.

Under date of May 7, 1913, the Commission advised complainant of the result of its investigation and recommended that she bring suit in a court of competent jurisdiction for the recovery of damages if she still believed that the baggage had been damaged while in the hands of the carriers, the Commission having no direct jurisdiction over cases of this nature.

Case No. 239—Damages to Live Stock Shipped from Diamond to Palisade.

April 25, 1913. Complaint received from Chas. P. Barnum against

the Nevada Transportation Company, lessee of the Eureka-Nevada Railway Company, alleging damages to live stock shipped from Diamond to Palisade.

The Commission took this matter up with the officials of the defendant company, and urged that the damage claim be allowed if it was found that such damages had resulted from negligence in handling the shipment on its line of railroad.

Under date of May 15, 1913, the company advised that after investigation it was found that it was in no way responsible for the damages to the shipment in question, and asked for permission to withdraw all of its livestock rates, giving as reasons that the business was small, and that it could dispose of its livestock equipment at a good figure. On May 28, 1913, the Commission refused to allow the company to withdraw its livestock rates.

Complainant was informed as to the attitude of the company relative to his claim, and it was recommended that he bring the matter before a court of competent jurisdiction if he believed he was entitled to damages, as the Commission had no direct jurisdiction over cases of this nature.

Case No. 240—Rates on Scrap Iron, Carloads, Dayton, Nevada, to San Francisco and Other Bay Points in California.

May 13, 1913. Complaint received from R. R. Newell against the Southern Pacific Company, alleging unreasonable and exorbitant rate on scrap iron in carload lots, Dayton, Nevada, to San Francisco and other so-called bay points in California.

Upon investigation it was found that the current rate applying to this commodity between the points named, if routed via Mound House and Reno, Nevada, was \$5.40 per ton. The Commission stated to the defendant company that it believed a rate of \$3.50 per ton routing via Hazen, Nevada, would be reasonable, and asked that such rate be established.

The defendant company notified the Commission that it was agreeable to establishing a rate of \$4.25 per ton, and, as the same was satisfactory to complainant, the case was adjusted on that basis.

Case No. 241—Additional Charges Assessed on Prepaid Shipments.

May 14, 1913. Complaint received from the Yerington Drug Company against the Nevada Copper Belt Railroad Company, alleging that on numerous prepaid shipments forwarded from eastern points the defendant company required the payment of additional charges at point of destination before the same would be delivered.

The Commission addressed a letter to complainant suggesting that in many instances agents at point of origin in the East apply erroneous rates on shipments destined to Pacific Coast points, which, in the case of prepaid shipments, necessitates either the collection of additional charges where there is an undercharge, or the refund of part of the prepayment where there is an overcharge. Complainant was also advised that the Commission would check the freight bills complained of, if the same were submitted for inspection.

As nothing further was heard from the complaint, the case was dismissed.

Case No. 242—Divisions of Through Freight Rates.

May 16, 1913. Complaint received from the Las Vegas and Tonopah Railroad Company against the Tonopah and Goldfield Railroad Company, alleging that the defendant company was demanding an excessive amount as its proportion of through freight rates from Nevada points on the San Pedro, Los Angeles and Salt Lake Railroad and the Las Vegas and Tonopah Railroad, to Tonopah, Nevada, and other points on the defendant's line of railroad when routed via Goldfield, Nevada.

Citation was issued to the defendant company under date of June 24, 1913, and the answer of the said company was duly filed on August 10, 1913. This case was set for hearing several times, but, on request of both parties to the proceeding, the hearing was postponed from time to time.

On December 28, 1913, a stipulation signed by both parties to the proceeding was received, asking that the case be dismissed without prejudice. At a regular meeting of the Commission held January 3, 1914, the case was formally dismissed.

Case No. 243—Operation of Ruby Hill Branch of Eureka-Nevada Railway, and Ore Rates, Ruby Hill to Palisade.

May 20, 1913. Telegraphic complaint received from the Richmond Eureka Mining Company against the Nevada Transportation Company, operating company of the Eureka-Nevada Railway Company, alleging that defendant was in the act of destroying that portion of the Eureka-Nevada Railway Company's line running from Eureka to Ruby Hill, Nevada, by the removal of rails and ties, thereby leaving complainant without facilities for shipping ore and freight between Ruby Hill and Palisade, Nevada. Complainant also stated that five hundred feet of track had already been removed.

Immediately upon receipt of this complaint the Commission telegraphed to the general manager of the Nevada Transportation Company advising him to discontinue the removal of the piece of road referred to until a full investigation of the matter could be made by the Commission. A telegram to the same effect was also forwarded to the Eureka-Nevada Railway Company, and the Commission was assured that no further track would be removed until an investigation could be made.

Hearing was held in this proceeding in Carson City on July 2, 1913, complainant being represented by Alfred Sutro, Counsel, and G. W. Heintz, Traffic Manager; and defendant, The Nevada Transportation Company, being represented by W. H. McNair, Attorney, and J. E. Sexton, General Manager. At the opening of the hearing it was stipulated by both parties that the question of ore rates, Ruby Hill to Palisade, Nevada, should be considered in addition to the question already at issue. Testimony was taken on behalf of complainant and defendant, and the case was submitted to the Commission for decision.

Under date of September 10, 1913, the Commission entered a tentative opinion in the case, recommending certain action on the part of defendant, and giving both parties until October 15, 1913, in which to make formal objection to the same, and stating that further hearing would be given both parties if any objections were filed.

The tentative opinion reads as follows:

[Case No. 243]

BEFORE THE RAILROAD COMMISSION OF NEVADA

RICHMOND EUREKA MINING COMPANY, *Complainant*,

v.

EUREKA-NEVADA RAILWAY COMPANY, and

THE NEVADA TRANSPORTATION COMPANY, *Defendants*.

OPINION

SHAUGHNESSY, *First Associate Commissioner*:

This proceeding was begun by the Commission upon its own initiative under date of February 10, 1913, after receipt of notice from the Richmond Eureka Mining Company that the Eureka-Nevada Railway, through its lessee, The Nevada Transportation Company, had withdrawn from the various connecting lines, the concurrences of the Eureka and Palisade Railway, its insolvent predecessor, in through joint rates to and from points on the Eureka-Nevada Railway, and that the new schedule of local rates covering the movement of low-grade ores, materials and supplies, between the towns of Palisade and Eureka, Nevada, was increased to such a point that the said mining company could not operate successfully thereunder.

Responsive to the investigation initiated by the Commission the following facts were developed:

HISTORICAL

A corporation was formed under the laws of the State of Nevada on November 19, 1873, to construct, operate and maintain a railroad between the town of Palisade and the town of Eureka, both in Eureka County, State of Nevada, under the name of the Eureka and Palisade Railroad. This corporation was capitalized for \$2,000,000, stock being issued for \$1,000,000, and later on a bonded indebtedness of \$1,000,000 was created upon which bonds were disposed of for practically the entire amount.

On June 13, 1900, the road was placed in the hands of a receiver, for the reason that said corporation had defaulted in the interest charges on said bonded indebtedness due for several years; that thereafter the road was operated by the receiver until February 1, 1902, when it was sold to satisfy the mortgage upon which the bonds were issued, to a corporation known as the Eureka and Palisade Railway Company, organized by the bondholders of the original Eureka and Palisade Railroad Company, under the laws of the State of Utah on July 10, 1901. The capitalization of the new corporation was reduced to \$300,000; and at the time of reorganization the stock of the original corporation was canceled and the parties owning the bonds agreed and did accept one share of stock in the new company (Eureka and Palisade Railway Company), at the par value of \$100 each for each \$300 of the old bonds.

That on March 1, 1910, the said Eureka and Palisade Railway Company was partially destroyed by flood, and for a period of approximately two years thereafter was totally disabled from further operation. Following the said disaster the road, having an indebtedness exceeding \$70,000, was placed in the hands of a receiver and was sold under a decree of the United States Circuit Court, Ninth Circuit, State of Nevada, on November 29, 1910, to George W. Heintz, General Manager of the said Richmond Eureka Mining Company, to satisfy said judgment.

Following the sale at public auction for the purpose above named, Mr. George Whittell of San Francisco, Cal., a stockholder and originally the purchaser and owner of \$365,000 of the bonds of the original corporation (Eureka and Palisade Railroad Company), requested the company to redeem the property within the statutory limit. The board of directors of the Eureka and Palisade Railway Company, at a regular meeting held in San Francisco, May 8, 1911, finding itself without funds and being without power to force contributions from its stockholders, and also without means of raising money from any other source, officially refused to redeem the property within the statutory limit.

Thereafter, it is alleged, Mr. Whittell did, on the 23d day of May, 1911, redeem

the said property by paying to the said George W. Heintz the amount of said judgment together with other costs, amounting in all to \$86,345.

Subsequent thereto on the 30th day of April, 1912, the Eureka-Nevada Railway Company was formed under the laws of the State of Utah, with a capitalization of \$500,000. The important provisions of its charter are given below:

The purposes, pursuit and business for which this corporation is organized and formed are as follows, to wit:

To buy, own, maintain, operate and further extend the railroad, rights, property and franchises of the Eureka and Palisade Railway Company, a corporation duly incorporated under the laws of the State of Utah, which rights, property and franchises have been sold under judicial proceedings in the enforcement of a mortgage lien authorized in a certain action of record in the Circuit Court of the United States, Ninth Judicial Circuit, District of Nevada, and entitled *National Bank of D. O. Mills and Company (a corporation), Complainant, v. Eureka and Palisade Railway Company (a corporation), and the Richmond Eureka Mining Company (a corporation), Defendants*, and numbered 1132 on the files and records of said court; to operate said railroad or any part thereof by steam, electrical or other power, to lease the same or any part thereof, and to exercise and enjoy all the rights, powers and privileges, and franchises which, at the time of the sale of said railroad, belonged to or were vested in said company, and all the rights, privileges, powers and franchises of railroad corporations organized under the laws of the State of Utah.

That the termini of the railroad purchased and acquired as aforesaid by this corporation (The Eureka-Nevada Railway Company) are the town of Palisade and the town of Eureka, both in the county of Eureka, State of Nevada. Said road commences at Palisade in said county and State and runs thence in a southerly direction entirely within and through said county of Eureka, to and terminates at the town of Eureka, with a branch $4\frac{1}{2}$ miles in length, extending from the town of Eureka to the town of Ruby Hill, also in said county. The approximate length of said road, including said line to Ruby Hill, is $88\frac{1}{2}$ miles.

That all and singular the railroad, the assets, rights, properties, privileges and franchises formerly owned by the said Eureka and Palisade Railway Company, situated wholly in the county of Eureka, State of Nevada, described as follows:

First—A line of railway from Palisade, Eureka County, Nevada, to Eureka, in said county and State, a distance of 84 miles.

Second—A line of railway from Eureka, in said county and State, to Ruby Hill, in said county and State, a distance of $4\frac{1}{2}$ miles.

And also all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said Eureka and Palisade Railway Company and of George W. Heintz, purchaser at the judicial foreclosure sale aforesaid, and of George Whittell, assignee of said purchaser, in or to said properties and every part and parcel thereof with the appurtenant rights, privileges and franchises as aforesaid.

Thereafter on the 6th day of May, 1912, that part of the line between Palisade and Eureka (excluding the Ruby Hill extension) was leased to the Nevada Transportation Company, a corporation formed under the laws of the State of California with a capitalization of \$25,000. The latter corporation was formed for the purpose of leasing and operating the said Eureka-Nevada Railway, and in consideration of the lease agreement the Nevada Transportation Company agrees to pay to the Eureka-Nevada Railway an annual rental of 5 per cent on \$500,000, the capital stock of the Eureka-Nevada Railway Company, or, in other words, \$25,000 per annum.

Operation of the railway property by the Nevada Transportation Company was resumed between Palisade and Eureka on May 6, 1912, two years and two months following the time when the property was disabled by washouts.

REHABILITATION

Following the disposal of the property at foreclosure sale, an examination was made of the road by experts employed by the board of directors of the Eureka and Palisade Railway, with a view to ascertaining what it would cost to rehabilitate the property. The following is an extract taken from the minutes of the meeting of said board, held December 30, 1910: "To rehabilitate the property it will require a further outlay estimated at a minimum of \$150,000." Subsequent thereto Mr. Whittell, who redeemed the property, had an examination made. It was estimated that it would cost approximately \$50,000 to rehabilitate the line for light traffic and that for the purpose of heavy traffic an additional expenditure of \$100,000 would be necessary for additions and betterments to the line and for new equipment. Summarized, this estimate was as follows:

TABLE A

Cost of redemption.....	\$86,345
Rehabilitating the washed-out portions of the line.....	50,000
Repairing shop and roundhouse at Palisade.....	3,200
Renewing 7 miles of rail.....	19,200
Renewing 22,000 ties at 70 cents each.....	15,400
Repairing bridges and buildings.....	2,200
Repairing pipe lines and water tanks.....	2,500
Ballasting and raising 20 miles of track.....	15,000
Repairing cars on hand.....	2,500
Purchasing 30 twelve-ton H. C. cars.....	23,000
Purchasing 3 14x18 Mogul locomotives.....	23,000
Repairing 2 locomotives.....	3,000
Total.....	\$245,345
Less amount from sale of old rail.....	4,000
Net total.....	\$241,345

In addition to the foregoing, the Eureka-Nevada Railway contends that there should be added to the actual investment \$365,000 which Mr. Whittell originally invested in the bonds of the Eureka and Palisade Railroad Company.

Estimates were likewise made by the Richmond Eureka Mining Company, the purchaser of the property at foreclosure sale, and are approximately as follows:

TABLE B

Cost at foreclosure sale.....	\$72,000
Rehabilitation of property.....	75,000
Extra equipment.....	35,000
Additions, betterments, etc.....	18,000
Total.....	\$200,000

On the basis of this estimate the mining company contends that the actual property investment of the Eureka-Nevada Railway Company should not exceed \$200,000 for rate-making purposes, for the reason that if the property had not been redeemed, and had been allowed to remain in its control, that operations would have been resumed and continued upon a property valuation not exceeding \$200,000.

Thus far, due to inability on the part of both the mining company and the railway company to reach a satisfactory agreement as to rates covering the movement of ore, materials and supplies, between Ruby Hill and Palisade, the railway has been rehabilitated for light traffic only. It has been since May 6, 1912, and is now, in operation between Eureka and Palisade, Nevada.

It is alleged by the company that the cost of the said rehabilitation amounted to \$57,976 plus \$4,222 for attorneys' fees, which, when added to \$86,345, the cost of redemption, gives an actual property investment of \$148,543, which has thus far been made by the Eureka-Nevada Railway Company. Therefore, on the basis of the railway's estimate, submitted in this case, it will be seen that after approximately \$100,000 more is expended for betterments and new equipment, in order to rehabilitate the property for heavy traffic between Palisade and Ruby Hill, the actual investment of the Eureka-Nevada Railway Company will aggregate \$248,543.

Upon the other hand, the mining company has within recent years made an investment for property, equipment and development at the Ruby Hill mines aggregating several hundred thousand dollars.

It is able to estimate by a very close approximation that there is available more than 300,000 tons of \$9 ore which can be mined and shipped to the Utah smelters. In addition thereto the mining company is hopeful that the extraction of the said \$9 ore may result in the finding of ores which carry a very much higher value, and in this connection the mining company states that it will undertake to unwater the mines at heavy expense for the purpose of securing ores at the lower levels of the mine which, it is believed, have a value of approximately \$30 per ton.

The present rate maintained by the Nevada Transportation Company covering the movement of \$9 ore between Eureka and Palisade is \$2.60 per ton, which includes a transfer charge of 25 cents per ton at Palisade.

The rate which was formerly maintained by the Eureka and Palisade Railway and its connecting carriers, between Ruby Hill, Nevada, and Midvale, Utah, was \$2.95 per ton, divided \$1.35 to the Eureka and Palisade Railway and \$1.60 to its connecting carriers.

Added to this expenditure the mining company alleges that the cost of mining is \$2.50 per ton and that the cost of sampling, smelting, refining and marketing

amounts to \$3.35, making a total of \$8.80 per ton for cost of extraction, transportation, reduction and sale.

From this it will be seen that there is left as a margin for profit only 20 cents per ton. It was urged at the hearing, however, that the Ruby Hill ores have a peculiar value for fluxing purposes separate and apart from the figures above shown, but this was not clearly established. However, from a purely comparative viewpoint within the knowledge of the Commission, it occurs to the members thereof that the Ruby Hill ores, while perhaps returning to the Richmond Eureka Mining Company a margin of only 20 cents per ton profit, are, nevertheless, not without substantial value to some other related company. For example, the Richmond Eureka Mining Company is owned and operated by the United States Smelting and Refining Company. The ores thereof carry a large percentage of iron and also some lead. They must, therefore, have a substantial fluxing value to the smelting company.

This conclusion is supported by the fact that the American Smelting and Refining Company owns and operates an iron-ore deposit at Barth, Nevada (six miles west of Palisade), which it mines and ships to its smelter at Salt Lake for fluxing purposes. These ores carry no other values. The cost of mining and shipping this ore must, at the very least, represent its value to the American Smelting and Refining Company; otherwise the expenditure would not be made. There is mined and shipped from Barth an average of 250 tons of this ore per day. The cost thereof will probably average 60 cents per ton for mining, plus \$1.65 for transportation from Barth to Salt Lake, or a total cost of \$2.25 per ton. The Commission, therefore, feels that it is not unfair to assume that the Ruby Hill ores have at least a similar value to the United States Smelting Company for fluxing purposes.

Throughout this controversy the mining company has contended strenuously for the establishment of the same rate that formerly applied over the Eureka and Palisade Railway, including the Ruby Hill branch, viz, \$1.35 per ton. On the other hand, the railway company contends that \$1.35 per ton will not cover the cost of operation between Ruby Hill and Palisade, but, on the contrary, alleges that if the business is to render any profit the rate should not be less than \$2.23 per ton.

Pending negotiations on the part of this Commission with the said interested parties for the establishment of a satisfactory scale of rates covering the said commodities between Ruby Hill and Palisade, the Richmond Eureka Mining Company, early in March, 1913, brought a formal complaint before the Interstate Commerce Commission, a synopsis of which reads as follows:

Case No. 5554—Richmond Eureka Mining Company of Eureka, Nevada, against Eureka-Nevada Railway Company, *et al.*

Protests against increases in rates for the transportation of ore from the mines at Ruby Hill, Nevada, to Midvale, Utah, the result of cancel-out through rates and leaving in effect rates that are a combination of the locals.

Ask that the former rates be restored on all ores from Ruby Hill to Midvale; that defendants be required to establish rates of \$4 per ton on mine-run slack coal from Rock Springs, Wyo., to Ruby Hill, and of \$4.25 from Price, Hiawatha and Mohrland, Utah; that they be required to establish former rate of \$8 on ties and \$8.70 on mining timbers from Portland, Oreg., and that they be required to furnish sufficient cars for the working of the mines at Ruby Hill.

Thereafter J. E. Sexton, General Manager of the Nevada Transportation Company (lessee), and the duly appointed and authorized custodian of the Eureka-Nevada Railway property, began tearing up the rails and ties of the said Ruby Hill extension and moving them forward to a point on the line of the Eureka-Nevada Railway between Palisade and Blackburn, Nevada, for the purpose of reconstructing and bettering the line between those points.

One and one-half miles of track of the said railway had been torn up when, on May 20, 1912, the Richmond Eureka Mining Company, by its attorney, Mr. Alfred Sutro, filed a protest with this Commission against the further destruction of the line. In response thereto the Commission requested Mr. Sexton of the Nevada Transportation Company, and also Mr. Whittell, President of the Eureka-Nevada Railway Company, to discontinue the tearing up of any more track on the said line until the matter could be thoroughly investigated and determined by the Commission. This request was promptly complied with by both Mr. Whittell and Mr. Sexton.

Pursuant thereto the matter came on for formal hearing before the Commission at its offices in Carson City, July 2, 1913, at the beginning of which it was

stipulated and agreed as between all parties that the Commission should consider and determine whether the Nevada Transportation Company shall be permitted to continue to tear up the track between Eureka and Ruby Hill, and, as incidental thereto, if any has been torn up to order that it shall be replaced, and also what shall be reasonable rates to cover the movement of ore between Ruby Hill and Palisade. At the conclusion of the hearing it was agreed by both parties that the whole matter be submitted to the Commission with the understanding that the question be covered by an order which it may consider just and reasonable in the premises.

CONSIDERATION OF THE CASE

For the purpose of this case the Commission will consider the rehabilitation of the Ruby Hill extension, the operation of the entire line, and the rates covering the movement of ore between Ruby Hill and Palisade, for the reason that the tonnage thereof constitutes, or should constitute, on the basis of a movement of 200 tons per day, not less than 92 per cent of the entire traffic and 75 per cent of the entire revenue of the railroad; also, for the reason that the life and prosperity of the town of Eureka is almost wholly dependent upon the operation of the Richmond Eureka mines at Ruby Hill and, in fact, the success of the railroad itself is largely dependent upon the continued operation and success of the mines at Ruby Hill and points tributary thereto. The interests of the town of Eureka, the mining company, and the railroad are so closely interwoven in connection with their continued future prosperity that it appeals to the Commission as highly essential that a satisfactory adjustment of the controversy now pending between the parties should be reached at the earliest date possible.

The main points to be considered are:

First—The rehabilitation and operation of the Eureka-Nevada Railway's entire property.

Second—What is a just and reasonable rate to cover the movement of ore over the line of the Eureka-Nevada Railway?

REHABILITATION AND OPERATION

The Eureka-Nevada Railway Company is a corporation under the laws of the State of Utah, chartered to perform the services of a common carrier between the towns of Palisade, Nevada, and Ruby Hill, Nevada. Therefore, in the exercise of its contract it cannot, without the consent of the Legislature, abandon the operation of a part of its line and consent to render public service over only a particular portion thereof. (*New Jersey Steam Navigation Co. v. Merchants Bank*, 6 How. 382; *Cherokee Nation v. Southern Kansas R. R. Co.*, 135 U. S. 641; *Mo. P. R. R. v. Larabee Flour Mills Co.*, 211 U. S. 614.)

The arrangement by which the Eureka-Nevada Railway Company undertakes to lease that portion of its property between Eureka and Palisade, for operation, to the Nevada Transportation Company and abandons that portion of the property between Eureka and Ruby Hill, defeats the provisions of its charter which require the operation of the entire line between Palisade and Ruby Hill, and it is therefore clearly unreasonable and void.

This is seen to be especially true when it is considered that on the basis of the traffic carried for the fiscal year ending June 30, 1909, when the road was operated at its full capacity, the ore tonnage originating at Ruby Hill and moved over the line to Palisade, Nevada, constituted 92 per cent of the entire traffic and 75 per cent of the entire revenue of the road.

An implied condition attaches to all legislative grants of corporate powers that are conferred not merely as the privilege of the recipient to be used at its discretion, but as a *quasi* trust to be exercised for the benefit of the public as well. Consequently, any contract of a corporation by which it disables itself from performing its duties to the public, or subordinates to its private interest the rights and conveniences it impliedly undertakes to secure to the community, is beyond the lawful power of the corporation. Such a contract is contrary to public policy and is invalid on that ground also.

A corporation which undertakes to operate a railroad franchise assumes all the duties which spring by law from the character of its business and from customs incident to it, and it tenders a continuing offer to the general public that it will perform those duties for the benefit of each of them when demanded, which obligation is an enforceable contract. (Moore on Carriers, p. 93.)

Railroad companies invested with important powers and franchises by the State become to a certain extent public agencies, and in the exercise of their calling they

are held to a strict performance of the public duties enjoined upon them as a consideration for the rights and powers thus granted. (Id. p. 95.)

A railroad corporation cannot escape the performance of any duty or obligation imposed by its charter or the general laws of the State by a voluntary surrender of its road into the hands of lessees. The operation of the road by the lessee does not change the relations of the original company to the public. (*Railroad Co. v. Brown*, 17 Wall, 447; *N. Y. & Mid. R. R. v. Winans*, 17 How, 30; *Thomas v. Railroad Co.*, 101 U. S. 71; *Cent. Transpn. Co. v. Pullman Co.*, 139 U. S. 24; *Pullman Co. v. Cent. Transpn. Co.*, 171 U. S. 138; *Hartford Fire Ins. Co. v. Chicago R. R.*, 175 U. S. 91.)

A railroad is a public highway established primarily for the convenience of the public and to subserve public ends. A railroad corporation cannot, therefore, without the sanction of the government creating it, make any agreement that militates against the public convenience or that will defeat the public objects for which it was established. (*Cherokee N. v. So. R. R. Co.*, 135 U. S. 641; *N. J. Steam Nav. Co. v. Merchants Bank*, 6 How, 382.)

Railroads are public highways and it is the duty of a carrier to receive and carry the goods of all at reasonable compensation therefor. (*N. J. S. Nav. Co. v. Merchants Bank*, 6 How, 382; *Hannibal R. R. v. Swift*, 12 Wall, 270; *Winona R. R. v. Blake*, 94 U. S. 180; *Myrick v. Mich. R. R.*, 107 U. S. 102; *Wabash R. R. v. Pearce*, 192 U. S. 179; *Inman v. So. Carolina R. R. Co.*, 129 U. S. 123.)

A foreign corporation leasing a railroad is subject to the same regulation that the lessor would have been subject to had the lease not been made. (*Stone v. Illinois*, 116 U. S. 347; *Norfolk R. R. v. Pendelton*, 156 U. S. 687.)

The lease contract conveying the property of the Eureka-Nevada Railway, between Eureka and Palisade, to the Nevada Transportation Company, for operation, provides that an annual rental amounting to 5 per cent on the capital stock, or \$25,000 per annum, shall be paid by the lessee to the lessor. This arrangement is legal only in so far as it does not interfere with the performance of any duty or obligation imposed by the charter and the rendering of an adequate service to the public at reasonable compensation therefor.

Our conclusions are that the facts in this case and the law applicable thereto do not justify the defendant railway company in tearing up that portion of its line between Eureka and Ruby Hill and refusing to perform service thereupon for the complainant mining company. Upon the contrary, we are of the opinion that the defendant railway company should reconstruct that portion of the said line which has been torn up, rehabilitate the entire line for heavy traffic, and at the earliest possible date furnish service covering the movement of ores, materials and supplies between Palisade and Ruby Hill.

REASONABLENESS OF RATES

It now remains to find a reasonable rate for the movement of \$9 ore between Ruby Hill and Palisade.

As before stated, there is in sight at the present time approximately 300,000 tons of ore in the Richmond Eureka mines at Ruby Hill, and the mining company is desirous of shipping to the Salt Lake smelters at the rate of 200 tons of this ore per day.

It is also quite probable that further development of this and other mining properties in the vicinity of Eureka will considerably augment the 300,000 tons mentioned above. The Commission will not undertake to express an opinion as to the ultimate life of the Eureka mining district, for the reason that no one can say, in advance of actual development work, what amount of new ore may be discovered or how much the values thereof may be increased. We do know, however, that the mines at Eureka have been in operation for more than thirty years, and that at the present time they are in the hands of a strong and aggressive corporation who is prepared to prosecute active development work therein so long as there is any prospect of even very small returns upon the money invested.

It is also to be noted in passing that the resumption of operations by the mines at Ruby Hill will give to the railway a substantial inbound tonnage of coal, mining timbers and supplies for the mining company. The town of Eureka will be greatly vitalized, and thus the inbound movement of merchandise freight and the passenger business will be very substantially increased; also, it is not unlikely that the resumption of operations by the Richmond Eureka Mining Company may encourage other independent mining companies to resume operations in the vicinity of Eureka. At present everything in the Eureka district is at a standstill, and the resumption of operations of the line between Ruby Hill

and Palisade and the establishment of a just and reasonable rate for the movement of ores would seem to be imperative.

A review of the operations of the Eureka and Palisade Railway for the year 1909, when approximately 200 tons of ore per day were transported for the Richmond Eureka mines from Ruby Hill to Palisade, is enlightening. The gross tonnage handled for that period was 77,179 tons, of which 71,395 tons were ore.

The earnings for the period were:

TABLE C	
Gross earnings	\$129,371.64
Operating expenses	125,234.96
Net earnings	\$4,136.68
Taxes	4,411.29
Net income (deficit)	\$274.61
Freight earnings	\$108,915.04
Passenger earnings	17,191.20
Mail, express and miscellaneous earnings	8,265.40

The operating expenses as shown above seem to be clearly excessive and are not by any means fairly comparable with the operating expenses shown by any other railroad that is operating under substantially similar circumstances and conditions. This is made clear by the comparative statement set forth below, wherein the Eureka and Palisade Railway, for the year 1909, has been compared in statistical detail with the Nevada Central Railroad for the year 1911, and also with the Nevada Copper Belt Railroad for the year ending June 30, 1912:

TABLE D			
Item	Eureka and Palisade Railway (narrow-gage) for the year ending June 30, 1909	Nevada Central Railroad (narrow-gage) for year ending June 30, 1911	Nevada Copper Belt Railroad (standard-gage) for year ending June 30, 1912
Mileage operated	88	94	42
Traffic density (ton mileage per mile of road) ..	75,368	9,885	100,450
Train mileage	83,147	51,593	78,149
Car mileage	664,891	259,691	300,850
Maintenance-of-way expenses	\$42,172	\$12,908	\$12,039
Average per mile of road	\$480	\$140	\$286
Average per train-mile (cents)	50.72	25.01	15.41
Maintenance-of-equipment expenses	\$23,398	\$9,266	\$9,631
Average per mile of road	\$266	\$99	\$229
Average per car-mile (cents)	3.6	3.6	3.2
Transportation expenses	\$51,443	\$18,630	\$42,554
Average per mile of road	\$585	\$200	\$1,013
Average per train-mile (cents) .....	.62	.36	.55

It will be observed that the maintenance-of-way expenses, maintenance-of-equipment expenses and transportation expenses are compared on an actual basis, per mile of road basis, and a unit basis. The train-mile is used as the factor in finding the unit cost of operation for maintenance-of-way and transportation expenses, and the car-mile as the factor in finding the unit cost of operation for maintenance-of-equipment expenses.

In view of these comparisons (and others could be made if necessary), it would seem that the average costs shown by the Eureka and Palisade Railway are clearly excessive. If, as shown by the defendant railway company before the Commission, an additional expenditure of approximately \$100,000 is necessary for betterments and improvements to fully rehabilitate the property for heavy traffic, there would seem to be no good reason, after the expenditure is made, why the Nevada Transportation Company, or the Eureka-Nevada Railway, as the case may be, could not operate upon approximately the same unit cost basis as that shown by the Nevada Copper Belt Railroad or the Nevada Central Railroad.

An allowance of 25 cents per train-mile for maintenance-of-way expenses, 3½ cents per car-mile for maintenance-of-equipment expenses, and 50 cents per train-mile for transportation expenses, would seem to be a liberal estimate for operating expenses. Upon this basis the operating expenses would be as follows:

TABLE E

Maintenance-of-way expenses	\$20,786.75
Maintenance-of-equipment expenses	22,920.68
Transportation expenses	41,578.50
General expenses	7,500.00
Total operating expenses	\$92,786.93
Taxes (estimated)	5,000.00
Total operating expenses and taxes	\$97,786.93

The Commission finds that a rate of \$1.35 per ton will not enable the ore traffic to carry its fair proportion of the burden of operating the property of the Eureka-Nevada Railway Company at a profit. Such a rate proceeds upon the theory that the ore movement will pay the operating expenses and taxes of the road and leave the earnings from the passenger and merchandise business as profit. If this is conceded, the objection is that it does not permit of any leeway whatever for a readjustment in the freights and fares covering traffic other than ore, regardless of the question of their reasonableness, and under this scheme they must remain fixed as they are.

The Commission does not feel that it can give its approval to a system of rate-making which will not operate uniformly upon all classes of traffic. On a small line, such as the one before us, there is little or no opportunity for averages, and each class of traffic should be made to carry its share of the burden and thus enable the railway to conduct its operations at a reasonable profit without discrimination to any of its patrons.

As before stated, the ore traffic will, on the basis of the movement in 1909, constitute approximately 92 per cent of the total traffic. Two hundred tons per day is 73,000 tons per annum, and it is to be observed that if this amount is divided into \$97,780, the estimated expenses and taxes, the average cost per ton is approximately \$1.34.

In view of the expenditures which must be made for reconstruction, betterments and new equipment, the Commission is of the opinion that in order to enable the company to operate the ore traffic at a profit and enable it to get its money back within a reasonable period of time, the rate should not be less than \$1.65 per ton. On the basis of \$1.65 per ton, the results will be as follows:

TABLE F

Capitalization	\$500,000.00
Actual investment (when completed)	\$248,543.00
Operating expenses and taxes (estimated)	\$97,780.00
73,000 tons at \$1.65	\$120,450.00
Ratio of ore tonnage to total tonnage	92.00%
Applying 92% of estimated operating expenses and taxes (\$97,780) to ore traffic	\$89,957.00
Net income	\$30,493.00
Net income return on 92% of capitalization (\$460,000)	6.63%
Net income return on 92% of actual investment (\$228,659)	13.33%

CONCLUSION

This opinion is submitted tentatively with the understanding that the complainant, Richmond Eureka Mining Company, and the defendants, Eureka-Nevada Railway Company and the Nevada Transportation Company, may have until October 15 within which to comply with the recommendations therein contained, or, if unsatisfactory, to except thereto by formal objection to the Commission. If formal objection is made, the case will be set down for further hearing and the parties complaining given an opportunity to meet the issues raised by the opinion. If, upon the other hand, no objection is made, an order in conformity with the opinion will be promulgated.

[SEAL]

Dated September 10, 1913.

RAILROAD COMMISSION OF NEVADA,

By E. H. WALKER, *Secretary*.

On October 2, 1913, the Commission received a formal objection to its tentative opinion from defendant, and the case was set for rehearing to take place October 20, 1913, which date was later vacated and changed to November 21, 1913, at Carson City.

Rehearing was held in this proceeding on November 21, 1913. Complainant was represented by Alfred Sutro, Counsel, and G. W. Heintz, Traffic Manager; and defendant by G. E. Stoker, Attorney, and J. E. Sexton, General Manager. G. E. Stoker, Attorney, and E. H. Clar,

Secretary, appeared on behalf of the Eureka-Nevada Railway. By stipulation it was agreed that the Eureka-Nevada Railway Company should also be entered as a defendant in the case. Testimony was taken on behalf of complainant and defendants, and the case submitted to the Commission for decision.

On November 17, 1913, a petition was received, signed by the citizens of Eureka, which related to this proceeding, and was formally entered and made of record in the case.

Up to the closing of this report, the Commission has not made its final decision in this case.

Case No. 244—Joint Telephone Toll Rates.

May 21, 1913. Complaint received from the Utah, Nevada and Idaho Telephone Company against the Pacific Telephone and Telegraph Company and Bell Telephone Company of Nevada, alleging that the defendant companies refused to accept for transmission all telephone messages originating on the line of complainant, and asking that the Commission require defendants to accept and transmit such messages.

Citations were issued to the defendant companies on June 9, 1913, and answers were filed with the Commission on August 16, 1913, time having been extended to that date for the filing of the same.

This case was set for hearing to take place in Carson City, October 18, 1913.

On October 4, 1913, a communication was received from attorneys for complainant asking that the proceeding be dismissed, the questions involved having been satisfactorily adjusted.

At a regular meeting of the Commission held October 18, 1913, the case was formally dismissed.

Case No. 245—Regarding Opening of Gates in Yards at Sparks.

May 30, 1913. Complaint received from John B. O'Sullivan against the Southern Pacific Company, alleging that by the closing of certain gates in the railroad yards at Sparks, and the opening of other gates in lieu thereof, a certain amount of property located adjacent to the old gates had greatly depreciated in value. The Commission was asked to require the defendant company to reopen the old gates which had been closed since the strike of the winter of 1911-1912 and had never been reopened.

The Commission laid this matter before the officials of the Southern Pacific Company, who expressed an unwillingness to take any action in the matter.

As this was a case over which the Commission had absolutely no jurisdiction, it being one in which it could only use its good offices, the same was dismissed for lack of jurisdiction July 15, 1913.

Case No. 246—Rates on Brick, Hollow Brick, and Tile, Carson to Wabuska.

June 16, 1913. Complaint received from H. Luhrs against the Southern Pacific Company and Virginia and Truckee Railway, alleging unreasonable rates on brick, hollow brick, and tile, Carson City to Wabuska, Nevada, and asking that the Commission order the defendant companies to establish a reasonable joint rate covering the same, after hearing and investigation.

Under date of July 31, 1913, citations were issued to the defendant companies. The answer of the Southern Pacific Company was filed

August 16, 1913, and of the Virginia and Truckee Railway on August 24, 1913.

The hearing in this proceeding was set to take place in Carson City, October 10, 1913, and later postponed to an indefinite time, as defendants were endeavoring to reach a satisfactory adjustment of the same.

At the time of closing this report the case was still pending.

Case No. 247—Station Facilities at Fernley.

June 12, 1913. Complaint received from N. W. Willis, District Attorney of Lyon County, against the Southern Pacific Company, alleging that several serious accidents had occurred at Fernley, Nevada, for the reason that there was no depot building at that point, and, further, that passenger trains coming in from Southern Pacific main-line points did not make proper connections with trains leaving Fernley destined to branch-line points on the Fernley-Lassen branch of the company.

Under date of July 9, 1913, the questions involved in this proceeding were taken up with the general manager of the defendant company, who advised under date of July 17, 1913, that arrangements had been made for proper train connections at Fernley, and, further, that the company had under consideration the building of a depot at that point.

Under date of July 30, 1913, complainant was notified of the action taken by the Southern Pacific Company, and under date of July 31, 1913, complainant advised the Commission that such action satisfactorily disposed of his complaint.

Case No. 248—Rate on Coke, Cokedale, Colo., to Wabuska, Nevada.

June 19, 1913. Complaint received from S. W. Belford against the Southern Pacific Company and other carriers, asking the Commission's assistance in securing a carload rate of \$8 per ton on coke from Cokedale, Colo., to Wabuska, Nevada.

Under date of June 20, 1913, this matter was taken up with the officials of the Southern Pacific Company, and on July 4, 1913, the Commission received notice that the rate asked for would be published and made effective at the earliest possible date. This rate was later published and made effective July 28, 1913, and complainant was so notified.

Case No. 249—Demurrage Charges on the Nevada-California-Oregon Railway, at Reno.

July 9, 1913. The Commission on its own motion took up the question of the establishment of a \$1 per day demurrage rate, in lieu of the \$3 per day rate in effect at Reno, Nevada, on the Nevada-California-Oregon Railway Company's line. The company was informed that at all other points in Nevada a rate of \$1 per day was in effect, and in the interest of uniformity was advised to establish a \$1 rate at Reno.

Under date of August 26, 1913, the defendant company informed the Commission that it desired to maintain a \$3 per day rate at Reno, for reasons fully set forth. At a regular meeting of the Commission held September 6, 1913, it was ordered that this case to be held in abeyance for the time being.

Case No. 250—Classification of Fruits and Vegetables.

July 14, 1913. It appearing to the Commission that, effective July 23, 1913, various railroads operating in the State of Nevada intended to

increase the classification of fruits and vegetables on their interstate traffic, a formal protest was sent to the Interstate Commerce Commission, asking that such increase be suspended until a full investigation of the reasonableness of the same could be made.

The proposed classification increased fruits in straight carload lots, and fruits and vegetables in mixed carload lots from Class C to Class 5, and fruits and vegetables in less-than-carload lots from Class 4 to Classes 3, 2, and 1, and, in one or two instances, to double first class.

On July 26, 1913, the Commission received notice from the Interstate Commerce Commission that the classifications complained of had been suspended until November 20, 1913.

On November 1, 1913, the Commission received notice from the Interstate Commerce Commission that the increased classifications had been further suspended until May 20, 1914.

Hearing was held in this proceeding in Sacramento, Cal., before Examiner Hart of the Interstate Commerce Commission, on December 8, 1913, the Nevada Commission being represented by Chief Commissioner Bartine, Second Associate Commissioner Simmons, and Secretary Walker. The Arizona Corporation Commission and the Merchants' and Manufacturers' Traffic Association of Sacramento were also represented, and protested the proposed increases. The railroads represented were the Southern Pacific Company, Western Pacific Railway Company, and Atchison, Topeka and Santa Fe Railway Company.

At the time of the closing of this report the case is still pending. All parties having been given time in which to file briefs, before the same was finally submitted, the brief of this Commission, prepared by Chief Commissioner Bartine, was duly filed with the Interstate Commerce Commission.

Case No. 251—Telephone Service in Reno.

July 22, 1913. Complaint received from George Pyatt of Reno, Nevada, against the Bell Telephone Company of Nevada, alleging that the telephone number at his place of business had been changed from Number 38 to Number Main 1835 J, and asking that his old number be restored.

On July 24, 1913, the Commission received notice from complainant that the defendant company had agreed to reestablish his old telephone number, and asked that the complaint be dismissed. At a regular meeting of the Commission held July 26, 1913, the case was formally dismissed.

Case No. 252—Rate on Slab Wood, Carloads, Truckee, Cal., to Lovelock, Nevada.

July 22, 1913. Complaint received from A. G. McBride against the Southern Pacific Company, alleging unreasonable rate on slab wood in carload lots, Truckee, Cal., to Lovelock, Nevada, and asking that a reasonable rate be secured.

Under date of August 1, 1913, a letter was addressed to the Freight Traffic Manager of the Southern Pacific Company, recommending that a rate of \$1.95 per cord, or 97½ cents per ton, be established between the points named, instead of a rate of \$1.60 per ton, then in effect.

On August 7, 1913, the Commission received notice from the Southern Pacific Company to the effect that it was willing to establish a rate of \$1.85 per cord. Complainant was so notified, and the case was dismissed.

Case No. 253—Rate on Lumber, Carloads, Verdi to Tobar, Nevada.

July 24, 1913. Complaint received from Cornelius Hoaglin against the Southern Pacific Company and Western Pacific Railway Company, alleging the rate of \$6.75 per ton on lumber in carload lots, Verdi to Tobar, Nevada, to be unreasonable, and asking for the establishment of a reasonable rate for the service rendered.

Upon investigation it was found that the \$6.75 per ton rate applied to shipments routed Verdi to Boca, via Southern Pacific Company, and thence Boca, Cal., to Tobar, Nevada, via Boca and Loyaltan Railroad and Western Pacific Railway. It was also found that the rate from Verdi to Wells, a straight Southern Pacific Company haul, was \$4 per ton, while Tobar was located about 20 miles east of Wells on the Western Pacific Railway, but, as there were no facilities for interchanging traffic at Wells or other points in Nevada located on the two roads, shipments were necessarily routed either via Boca and Loyaltan and Western Pacific to destination, or else via Reno over the Nevada-California-Oregon Railway and thence Western Pacific to destination. Via the latter route the through rate was \$6.50 per ton.

Under date of August 1, 1913, the Commission addressed letters to the officials of the defendant companies, urging that interchange tracks be established between the two lines at Winnemucca, Wells, and Elko, and that a through rate of either \$5 or \$4.75 per ton be published and made effective on lumber in carload lots, Verdi to Tobar, Nevada.

At the time of closing this report the case is still under investigation.

Case No. 254—Rate on Beer, Carloads, Palisade to Eureka.

July 25, 1913. Complaint received from the Salt Lake City Brewing Company against the Eureka-Nevada Railway Company, alleging that the defendant company had increased its rate on beer in carload lots from a rate of 70 cents per cwt. to a rate of \$1 per cwt., Palisade to Eureka, and asking that the 70-cent rate be reestablished.

Upon investigation it was found that the rate complained of had been made effective by the defendant railroad company July 8, 1913, and under date of August 1, 1913, the Commission advised the company to reestablish the old rate of 70 cents per cwt., which was done, effective December 8, 1913.

Case No. 255—Switching Charges on Less-than-Carload Freight, Wabuska to Thompson.

July 25, 1913. Complaint received from M. H. Farris against the Nevada Copper Belt Railroad Company, alleging unreasonable charges for the switching of less-than-carload shipments, Wabuska to Thompson, and asking that reasonable rates be established.

After an investigation of this matter, the Commission addressed a letter to the defendant company, recommending that the following rates be established to govern the movement of less-than-carload freight between Wabuska and Thompson:

First class.....	6 cents per cwt.
Second class.....	5 cents per cwt.
Third class.....	5 cents per cwt.
Fourth class.....	5 cents per cwt.

During the investigation of this case the complainant left Thompson, Nevada, and his business was taken over by the firm of Hall & Morgan.

A letter was addressed to the new firm, under date of December 19, 1913, asking whether it was their desire to continue the investigation in this proceeding. At the time of closing this report no answer has been received from the firm above mentioned.

Case No. 256—Rate on Fruits and Vegetables, Goldfield to Tonopah.

July 30, 1913. Complaint received from H. Peterson & Company against the Tonopah and Goldfield Railroad Company, alleging excessive rates for the transportation of fruits and vegetables in half-carload lots from Goldfield to Tonopah.

Complainant was notified that the issues raised in this proceeding would be considered together with those raised in Case No. 242, entitled *Las Vegas and Tonopah Railroad Company v. Tonopah and Goldfield Railroad Company*.

Case No. 257—Estimated Weights Applied on Flour in Sacks.

August 13, 1913. Complaint received from the W. C. Pitt Warehouse Company against the Southern Pacific Company and Tonopah and Goldfield Railroad Company, alleging discrimination in the application of estimated weights applied to shipments of flour in sacks when forwarded from Lovelock, Nevada, to points on the Tonopah and Goldfield Railroad, as compared with the estimated weights applied on shipments forwarded from points outside of the State of Nevada to points within the State.

Upon investigation it was found that the estimated weights applied on shipments of this commodity, from points in California and Nevada to points on the Tonopah and Goldfield Railroad, were as follows:

Whole sacks.....	98 pounds
Half sacks.....	49 pounds
Quarter sacks.....	24½ pounds

Upon shipments of flour moving from Utah points to points on the Tonopah and Goldfield Railroad the following estimated weights were applied:

Whole sacks.....	98 pounds
Half sacks.....	48 pounds
Quarter sacks.....	24 pounds

Under date of August 25, 1913, the questions involved in this case were taken up with the officials of the Southern Pacific Company and Tonopah and Goldfield Railroad Company, who advised that the discrimination had been eliminated by raising the estimated weights applying from Utah points to the basis of those applying from California and Nevada points.

In view of the fact that the weights applied on shipments moving from Nevada points were correct when figured on the basis of whole sacks, half sacks, and quarter sacks, and further that the discrimination had been removed by raising the estimated weights applied from Utah points, the Commission deemed it inadvisable to take any further action at that time, and so notified complainant.

Case No. 258—Water Rates Charged by San Pedro, Los Angeles and Salt Lake Railroad Company at Moapa.

August 17, 1913. Complaint received from W. J. Powers against the San Pedro, Los Angeles and Salt Lake Railroad Company, alleging discrimination in the application of water rates at Moapa.

This case has been transferred to Public Service Commission cases, and will be found in the report of that Commission.

Case No. 259—Overcharges on Shipments Moving from Goldfield to Mina.

July 26, 1913. Complaint received from the Verdi Lumber Company against the Tonopah and Goldfield Railroad Company, alleging overcharges on two carload shipments moving from Goldfield to Mina, and thence to Verdi, one consisting of lumber and the other consisting of wood-working machinery.

Upon investigation it was found that the rate charged on the carload of lumber for the movement, Goldfield to Mina, was 65 cents per cwt., which should have been 56 cents per cwt. On the carload of wood-working machinery the rate charged was 76 cents per cwt., which should have been 63 cents per cwt.

Under date of August 15, 1913, this matter was taken up with the traffic manager of the Tonopah and Goldfield Railroad Company, who was advised to make refunds on the two shipments in line with the Commission's findings.

On August 29, 1913, the Commission was advised by the defendant company that the refunds would be made, and complainant was so notified.

Case No. 260—Charges for Extension Telephone Service.

July 31, 1913. Complaint received from the Nevada State Journal against the Bell Telephone Company of Nevada, alleging unreasonable and exorbitant charges for extension telephone service in the city of Reno, and asking that reasonable rates be established for such service.

Under date of September 2, 1913, citation was issued to the defendant company, requiring it to appear before the Commission and answer the complaint in this proceeding on September 27, 1913.

Hearing was held in this case on September 27, 1913, at the offices of the Commission in Carson City, before Commissioners Shaughnessy and Simmons. No appearances were made on behalf of complainant. The defendant company was represented by James T. Shaw, attorney and expert. At the close of the taking of testimony, the defendant company was given time in which to file a brief, which was duly received, and the case submitted to the Commission for decision.

At the time of closing this report the case has not been decided.

Case No. 261—General Complaint.

September 12, 1913. Complaint received from party wishing name withheld, in which it was charged that the official of a certain company was acting unjustly towards a certain employee. As this was a case purely personal in character, the complainant was notified that the Commission had no jurisdiction whatever, and the case was dismissed.

Case No. 262—Rate on Fruits and Vegetables, Tonopah to Goldfield.

Complaint was received from H. Peterson & Company against the Tonopah and Goldfield Railroad Company, alleging that rate on fruits and vegetables in half-carload lots, Tonopah to Goldfield, had been fixed at 27 cents per cwt., effective August 1, 1913, while for the last four years a rate of 16 cents per cwt. had been in effect. Complainant charged that the increased rate was unreasonable and excessive, and asked that the old rate be reestablished.

Complainant was notified that the issues raised in this proceeding would be considered together with those raised in Case No. 242, entitled *Las Vegas and Tonopah Railroad Company v. Tonopah and Goldfield Railroad Company*.

Case No. 263—Rates on Beer, Carloads, Carson City to Tonopah.

September 26, 1913. Complaint received from Carson Brewing Company against the Virginia and Truckee Railway, Southern Pacific Company, and Tonopah and Goldfield Railroad Company, alleging joint rates of \$1.18½ per cwt., on beer, in glass, carloads, and \$1.10 per cwt. on beer, in wood, carloads, Carson City to Tonopah, to be excessive and unreasonable, and asking that the Commission establish a rate of 75 cents per cwt., or such other rate as might be found just and reasonable, to cover shipments of this character moving between the points named.

Under date of September 30, 1913, citations were issued to defendant companies giving them until October 23, 1913, in which to answer the complaint in this proceeding, and answers were duly filed on or before the date named.

Before this case came to a hearing the defendant companies informed the Commission that they were willing to establish a rate of \$1 per cwt. on beer in glass, or in wood and glass mixed, and rate of 95 cents per cwt. on beer in wood, carloads, Carson City to Tonopah and Goldfield. Complainant was so advised, and replied that such an adjustment would be satisfactory. The carriers established the rates effective October 26, 1913.

On November 6, 1913, a communication was received from complainant asking that the case be dismissed, and on November 11, 1913, the same was formally dismissed by the Commission.

Case No. 264—Freight Service to and from Blackburn.

October 28, 1913. Complaint received from W. L. McGregor against the Eureka-Nevada Railway Company, alleging that he was being discriminated against by the defendant company, for the reason that it was impossible for him to get his freight transported from Blackburn to Palisade.

This matter was taken up with the officials of the defendant company, who were advised that they had no right to discriminate in the matter of rendering service to the patrons of the railroad. After some correspondence the case was satisfactorily settled.

Case No. 265—Rate on Potatoes, Carloads, Eureka to Palisade.

November 4, 1913. Complaint received from the Merchants' and Manufacturers' Traffic Association of Sacramento, Cal., against the Eureka-Nevada Railway Company, alleging rate of 50 cents per cwt. on potatoes in carload lots, Eureka to Palisade, to be excessive and unreasonable, and asking that rate of \$5 per ton be established.

Under date of November 11, 1913, the question involved in this proceeding was taken up with the general manager of the defendant company, who replied under date of November 13, 1913, to the effect that the company would establish a rate of \$4.50 per ton, plus 25 cents per ton transfer charges at Palisade, Nevada, to apply on potatoes in both carload and less than carload lots, Eureka to Palisade. The rate referred to was made effective November 25, 1913.

Case No. 266—Beer Rates, Less than Carload, Carson City to Thorne, Luning, and Mina.

November 8, 1913. Complaint received from the Carson Brewing Company against the Virginia and Truckee Railway and the Southern Pacific Company, alleging unreasonable and exorbitant rates for the transportation of beer in less-than-carload lots, from Carson City to Thorne, Luning, and Mina, via Mound House, and asking that through joint rates be established equal to those in effect from Reno to the points named.

Upon investigation the Commission came to the conclusion that complainants contention was *prima facie* a just one, and under date of November 11, 1913, addressed letters to the traffic officers of the defendant companies advising them to establish the rates asked for.

At the time of closing this report the questions involved in the proceedings are still under consideration.

Case No. 267—Rate on Soft Wood, Carloads, Verdi to Mogul.

November 15, 1913. Complaint received from the Lawton Lumber Company against the Southern Pacific Company, alleging excessive charges on carload of soft wood moving from Verdi to Mogul, Nevada, the rate assessed being \$1 per cord, and further alleging that the same commodity was being transported by the defendant company from Verdi, Nevada, to Truckee, Cal., at the rate of \$6 per car. Complainant asked for protection of charges on the shipment in question on the basis of \$6 per car, the movement Verdi to Mogul being intermediate to the movement Verdi, Nevada, to Truckee, Cal.

Upon investigation it developed that the \$6 per car rate, Verdi to Truckee, applied only on cordwood pulp and waste damaged lumber, and not to fuel wood which was contained in the shipment complained of. Complainant was so notified, and, nothing further being heard, case was dismissed.

Case No. 268—Transfer Charges at Pioche.

October 29, 1913. Complaint received from the F. C. Richmond Machinery Company against the Pioche Pacific Railroad Company, alleging that the receiver of the defendant company had quoted a rate of \$2 per ton for the transportation of machinery and lumber from Pioche to Jackrabbit, and that several shipments were forwarded with the understanding that the \$2 per ton rate was to be applied. Complainant further alleged that soon after the rate named was quoted, the railroad passed back into the hands of its own directors, who advised that the shipments on machinery and lumber would not be transported at the rate named by the receiver, but that an additional charge would be made for the transfer of the freight from the cars of the San Pedro, Los Angeles and Salt Lake Railroad to the cars of the Pioche Pacific Railroad at Pioche. The Commission was advised that the freight was being held at Pioche, and asked to enforce the protection of the \$2 per ton rate.

The questions involved in this proceeding were immediately taken up with the officials of the defendant company, who insisted that there would be absolutely no profit in transporting the freight at a rate of \$2 per ton, unless charges were added for transferring the freight, which was extremely expensive, owing to the poor transfer facilities furnished by the San Pedro, Los Angeles and Salt Lake Railroad Company.

The matter was then taken up with the officials of the San Pedro lines, who stated under date of November 19, 1913, that they would endeavor to improve the transfer facilities at Pioche at an early date.

The Commission finding that no further action could be taken for the time being, complainant was notified as to the attitude of the two companies, and at the time of the closing of this report the case is being held in abeyance.

Case No. 269—Classification of Galvanized-Iron Air Pipe Under Twelve Inches in Diameter.

November 13, 1913. Complaint received from the Nevada Freight Claim Bureau against the Southern Pacific Company, and other carriers in Nevada party to the Pacific Freight Tariff Bureau's Exceptions to the Western Classification. Complainant alleged that the classification of galvanized-iron air pipe, under 12 inches in diameter, had been the third-class rate from the year 1903, until a time just prior to the filing of this complaint, when it was raised to the double first-class rate. The Commission was asked to investigate the matter, and require carriers to make refunds on all shipments moving between points in Nevada upon which charges were assessed higher than the third-class rate.

At the time of closing this report the case is still under investigation.

Case No. 270—Depot Site and Facilities at Verdi.

November 17, 1913. Complaint received signed by a large number of citizens of Verdi against the Southern Pacific Company, alleging inadequate depot facilities in the town of Verdi, and further alleging that the site upon which a proposed depot was to be erected by the defendant company would cause a hardship on the majority of the citizens of Verdi, the same being situated 2,183 feet from the business center of the town, thereby causing passengers great inconvenience in having such a distance to travel between the town and the depot.

Under date of November 20, 1913, citation was issued to the defendant company, requiring it to answer the complaint on or before December 15, 1913. The answer was duly received on December 14, 1913.

At the time of closing this report the time and place for hearing this case has not been set.

Case No. 271—Operation of Trains on the Pioche Pacific Railroad.

November 19, 1913. Complaint received from W. H. Pitts and others against the Pioche Pacific Railroad Company, alleging that train service had been discontinued on the defendant company's line, and asking that the Commission require the company to operate its trains and give service to the general public.

Under date of November 26, 1913, citation was issued to the defendant in this proceeding requiring it to answer the complaint within twenty days of the receipt of the citation.

At the time of closing this report answer has not been filed. The Commission has been advised that the Pioche Pacific Railroad Company is operating its trains and giving service to the general public. Under date of December 20, 1913, a letter was received from the attorney for defendant, stating that complainants had notified him that the Commission would be asked to dismiss the case.

Case No. 272—Charges Assessed Passengers Using Drawing-Rooms and Compartments in Pullman Cars.

November 25, 1913. Complaint received from George Wingfield against the Southern Pacific Company, and other carriers operating Pullman cars, alleging that, effective December 1, 1913, any one passenger using a drawing-room in a Pullman car would be required to pay the equivalent of two full fares in addition to the regular charge assessed by the Pullman Company for the use of drawing-rooms, and that any one passenger using a compartment would be required to pay the equivalent of one fare and a half in addition to the Pullman charge. Complainant further alleged that such charges were unreasonable and unjust, and asked that the defendant companies be required to desist from charging the additional fare for the use of drawing-rooms and the additional half fare for the use of compartments.

As this question affected interstate traffic principally, a formal complaint was made by the Commission to the Interstate Commerce Commission under date of December 30, 1913.

At the time of closing this report the case is pending before the Interstate Commerce Commission.

Case No. 273—Minimum Charges for the Movement of Less-than-Carload Freight Between Points in Nevada.

December 10, 1913. This case was taken up by the Commission on its own motion, it appearing that, effective January 1, 1914, the Southern Pacific Company proposed to raise the minimum charges governing the transportation of less-than-carload freight between Nevada intrastate points, from 25 cents for each individual shipment to a basis of 100 pounds at the class rate governing, but not less than 25 cents, and further that shipments of high explosives would be raised from the regular 25-cent charge to 100 pounds at the double first-class rate, but not less than \$1 for each shipment.

The Southern Pacific Company was asked to postpone the effective date of these increases to February 1, 1914, in order that the Commission might investigate and determine the reasonableness of the proposed charges. Under date of December 19, 1913, the Commission was officially informed that the effective date of the new charges would be postponed to the date named.

Under date of December 31, 1913, citation was issued to the Southern Pacific Company requiring it to appear before the Commission on January 15, 1914, for a formal investigation of the questions involved in this proceeding.

At the time of closing this report the case is still pending.

Case No. 274—Rate on Scrap Iron, Carloads, Dayton to Tonopah.

December 10, 1913. Complaint received from R. R. Newell against the Southern Pacific Company and Tonopah and Goldfield Railroad Company, alleging the current rate of \$9.50 per ton on scrap iron, carloads, Dayton to Tonopah, to be unreasonable and excessive, and asking that a joint rate of \$6 per ton be established.

On the same date this matter was taken up with the officials of the defendant companies, and at the time of closing this report the case is still under investigation.

Case No. 275—Rate on Refuse Potatoes, Carloads, Lakeview to Reno.

December 10, 1913. Request received from W. G. Douglass asking the Commission's cooperation in securing a rate of \$1 per ton on refuse potatoes in carload lots from Lakeview to Reno, over the line of the Virginia and Truckee Railway, the current rate being \$1.50 per ton.

The matter was taken up with the officials of the Virginia and Truckee Railway, who signified their willingness to establish the rate asked for.

The rate was published and made effective December 12, 1913, to expire one month from date of publication.

Case No. 276—Passenger Train Service on the Eureka-Nevada Railway.

December 13, 1913. Complaint received from E. T. Patrick, Deputy Attorney-General of Nevada, against the Eureka-Nevada Railway, alleging unsatisfactory passenger train service on the defendant company's line for the reason that passengers were forced to travel through from Palisade to Eureka and *vice versa* without being able to secure their noon meal at Blackburn, as had been the custom in the past. It appeared that the trains left Palisade at 8:45 a. m. and when on time arrived at Eureka at 4:45 p. m.

This question was taken up with the defendant company, which was instructed to immediately adjust the complaint, or formal proceedings would be instituted.

At the time of closing this report the case is still under investigation.

Case No. 277—Passenger Train Service on the Eureka-Nevada Railway.

December 17, 1913. Complaint received from D. Van Gelder, State President of the California Division of the Travelers' Protective Association of America, against the Eureka-Nevada Railway. This complaint is identical with that referred to under the heading of Case No. 276, and the action taken by the Commission was the same, both cases being handled together.

Case No. 278—Telephone Service at Hazen.

December 20, 1913. Complaint received from F. M. Manson of the Western Ore Purchasing Company, alleging that the County Commissioners of Churchill County refused to permit the Bell Telephone Company of Nevada to allow complainant connection with their telephone line at Hazen, and asking the Commission to adjust the matter.

Under date of December 26, 1913, complainant asked the Commission to withhold formal action, as a satisfactory adjustment of the question was likely to be reached by the contending parties.

At the time of closing this report no action has been taken by the Commission.

All of which is respectfully submitted.

H. F. BARTINE,
Chief Commissioner,
J. F. SHAUGHNESSY,
First Associate Commissioner,
W. H. SIMMONS,
Second Associate Commissioner.

E. H. WALKER, *Secretary.*

APPENDIX

ANNUAL REPORTS

OF THE

Railroads Operating in Nevada

**FOR THE YEARS ENDING JUNE 30, 1912, AND
JUNE 30, 1913**

CHARACTER OF CARRIER, AND NUMBER OF SHAREHOLDERS

Company	Character of carrier		Operated by		Number of share-holders	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	Operating	Operating	Operating	Operating	31,738	36,341
Bullfrog-Goldfield Railroad	Operating	Operating	Operating	Operating	8	8
Central Pacific Railway	Not operating	Not operating	Southern Pacific	Southern Pacific	12	10
Eagle Salt Works Railroad	Not operating	Not operating	Nevada Tran. Co.	Nevada Tran. Co.	7	6
Eureka-Nevada Railway	Operating	Operating	Operating	Operating	8	6
Goldfield Consolidated M. & T. Co.	Operating	Operating	Operating	Operating	8	8
Las Vegas and Tonopah Railroad	Operating	Operating	Operating	Operating	9	9
Nevada-California-Oregon Railway	Operating	Operating	Operating	Operating	14	14
Nevada Central Railroad	Operating	Operating	Operating	Operating	20	22
Nevada Copper Belt Railroad	Operating	Operating	Operating	Operating	10	10
Nevada Northern Railway	Operating	Operating	Operating	Operating	13	13
San Pedro, Los Angeles and Salt Lake Railroad	Operating	Operating	Operating	Operating	1	1
Silver Peak Railroad	Operating	Operating	Operating	Operating	14,397	15,757
Southern Pacific Company	Operating	Operating	Operating	Operating	55	54
Tonopah and Goldfield Railroad	Operating	Operating	Operating	Operating	8	8
Tonopah and Tidewater Railroad	Operating	Operating	Operating	Operating	15	15
Virginia and Truckee Railway	Operating	Operating	Operating	Operating	290	364
Western Pacific Railway	Operating	Operating	Operating	Operating	46,613	52,652
Totals						

MILEAGE AND CAPITAL STOCK

Company	Total mileage operated		Nevada mileage owned		Total shares of capital stock authorized	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	8,200.86	8,237.55	11.60	11.60	3,814,860	3,814,860
Bullfrog-Goldfield Railroad	83.01	83.01	83.01	83.01	20,000	20,000
Central Pacific Railway	(*)	(*)	679.26	684.59	872,765	872,765
Eagle Salt Works Railroad		13.13		13.13	2,000	2,000
Eureka-Nevada Railway	84.00	84.00	84.00	84.00	250	250
Goldfield Consolidated M. & T. Co.	3.96	3.96	3.96	3.96	4,000	4,000
Las Vegas and Tonopah Railroad	200.46	200.46	200.46	200.46	40,000	40,000
Nevada-California-Oregon Railroad	238.58	238.58	27.75	27.75	22,000	22,000
Nevada Central Railroad	48.30	48.30	53.30	53.30	7,500	7,500
Nevada Copper Belt Railroad	4.47	4.47	41.47	41.47	10,000	10,000
Nevada Northern Railway	155.68	155.68	155.68	155.68	20,000	20,000
San Pedro, Los Angeles and Salt Lake Railroad	1,131.90	1,131.90	267.10	267.10	250,000	250,000
Silver Peak Railroad	17.50	17.50	17.50	17.50	2,000	2,000
Southern Pacific Company	6,309.76	6,333.75	(C)	(C)	3,744,551 ¹	3,744,551 ¹
Tonopah and Goldfield Railroad	110.41	110.41	110.41	110.41	21,500	21,500
Tonopah and Tidewater Railroad	180.85	180.85	36.25	36.25	10,000	10,000
Virginia and Truckee Railroad	67.48	67.48	67.48	67.48	50,000	50,000
Western Pacific Railway	987.04	986.97	421.37	421.37	750,000	750,000
Totals	17,868.37	17,989.39	2,310.00	2,328.55	9,789,416¹	9,614,383

^aThe Central Pacific Railway operated no mileage.^bFigures taken from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.^cThe Southern Pacific Company owned no mileage in Nevada, but operated the Central Pacific Railway, for which mileage owned in Nevada is shown.

CAPITAL STOCK

Company	Total shares of capital stock outstanding		Capital stock— Total par value authorized		Capital stock— Total par value outstanding	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	2,843,735.30	3,050,805.30	\$381,486,000.00	\$381,486,000.00	\$294,373,530.00	\$306,080,530.00
Bullfrog-Goldfield Railroad	20,000	20,000	2,000,000.00	2,000,000.00	2,000,000.00	2,000,000.00
Central Pacific Railroad	846,755	846,755	87,275,500.00	87,275,500.00	84,675,500.00	84,675,500.00
Eagle Salt Works Railroad	2,000	2,000	25,000.00	25,000.00	25,000.00	25,000.00
Eureka-Nevada Railway ^a	25	25	400,000.00	400,000.00	400,000.00	400,000.00
Goldfield Consolidated M. & T. Co.	4,000	4,000	400,000.00	400,000.00	400,000.00	400,000.00
Las Vegas and Tonopah Railroad	15,000	15,000	2,200,000.00	2,200,000.00	1,500,000.00	1,500,000.00
Nevada-California-Oregon Railroad	22,000	22,000	2,200,000.00	2,200,000.00	2,200,000.00	2,200,000.00
Nevada Central Railroad	7,500	7,500	750,000.00	750,000.00	750,000.00	750,000.00
Nevada Copper Belt Railroad	10,000	10,000	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Nevada Northern Railroad	20,000	20,000	2,000,000.00	2,000,000.00	2,000,000.00	2,000,000.00
San Pedro, Los Angeles and Salt Lake Railroad	250,000	250,000	25,000,000.00	25,000,000.00	25,000,000.00	25,000,000.00
Silver Peak Railroad	2,000	2,000	200,000.00	200,000.00	200,000.00	200,000.00
Southern Pacific Company	2,726,724.06	2,726,724.06	374,451,800.00	374,451,800.00	272,675,780.64	272,672,405.64
Tonopah and Goldfield Railroad	21,500	21,500	2,150,000.00	2,150,000.00	2,150,000.00	2,150,000.00
Tonopah and Tidewater Railroad	10,000	10,000	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Virginia and Truckee Railroad	50,000	50,000	5,000,000.00	5,000,000.00	5,000,000.00	5,000,000.00
Western Pacific Railroad	750,000	750,000	75,000,000.00	75,000,000.00	75,000,000.00	75,000,000.00
Totals	7,599,299.61	7,808,809.36	\$963,941,625.00	\$964,138,300.00	\$759,927,260.64	\$780,880,935.64

^aFigures taken from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

FUNDED DEBT

Company	Total par value of funded debt authorized		Total par value of funded debt outstanding		Funded debt—Interest accrued	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$546,473,500.00	\$546,473,500.00	\$348,933,045.00	\$322,439,046.00	\$13,365,315.87	\$13,521,770.76
Burlingame-Goldfield Railroad	3,500,000.00	3,500,000.00	1,858,000.00	1,889,000.00	13,470.00	52,450.00
Central Pacific Railway	223,901,897.79	223,901,897.79	200,863,897.79	200,018,897.79	7,334,768.94	8,761,172.41
Eagle Salt Works Railroad	—	—	—	—	—	—
Eureka-Nevada Railway	—	—	—	—	—	—
Goldfield Consolidated M. & T. Co.	—	—	—	—	—	—
Las Vegas and Tonopah Railroad	—	—	—	—	—	—
Nevada-California-Oregon Railroad	1,500,000.00	1,500,000.00	1,415,000.00	1,401,000.00	41,813.90	48,047.23
Nevada Central Railroad	750,000.00	750,000.00	750,000.00	750,000.00	—	—
Nevada Copper Belt Railroad	1,000,000.00	1,000,000.00	622,000.00	622,000.00	59,151.66	37,320.00
Nevada Northern Railway	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	50,000.00	50,000.00
San Pedro, Los Angeles and Salt Lake Railroad	70,000,000.00	70,000,000.00	55,155,000.00	55,155,000.00	2,027,133.35	2,206,200.00
Silver Peak Railroad	—	—	—	—	—	—
Southern Pacific Company	238,319,000.00	238,319,000.00	140,537,410.00	160,581,910.00	5,418,562.99	5,631,813.76
Tonopah and Goldfield Railroad	1,500,000.00	1,500,000.00	1,038,000.00	950,000.00	43,590.00	38,970.00
Tonopah and Tidewater Railroad	3,650,594.10	3,650,594.10	3,235,344.10	3,235,344.10	155,810.16	152,181.24
Virginia and Truckee Railroad	—	—	—	—	—	—
Western Pacific Railway	75,000,000.00	75,000,000.00	75,000,000.00	75,000,000.00	3,748,245.97	3,750,000.00
Totals	\$1,215,594,991.89	\$1,217,094,991.89	\$827,505,696.39	\$823,041,696.89	\$32,444,517.51	\$34,249,925.40

FUNDED DEBT, AND CAPITAL STOCK AND FUNDED DEBT PER MILE OF ROAD

Company	Funded debt—Interest paid		Funded debt per mile of road		Capital stock per mile of road	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$13,141,403.67	\$13,669,210.87	\$32,465.00	\$39,980.00	\$26,687.00	\$33,866.00
Bullfrog-Goldfield Railroad	20,460.00	6,480.00	22,653.00	22,446.00	24,411.00	24,411.00
Central Pacific Railway	6,496,063.06	6,971,686.67	93,408.00	92,206.00	39,377.00	39,084.00
Eagle Salt Works Railroad						16,232.00
Eureka-Nevada Railway ^a					30.00	30.00
Goldfield Consolidated M. & T. Co.					101,010.10	101,010.10
Las Vegas and Tonopah Railroad					7,628.00	7,628.00
Nevada-California-Oregon Railway	40,113.88	49,276.00	6,931.00	5,872.00	9,221.00	9,221.00
Nevada Central Railroad			8,089.00	8,089.00	8,089.00	8,089.00
Nevada Copper Belt Railroad	51,087.10	32,101.34	14,998.79	15,692.52	24,113.82	24,113.82
Nevada Northern Railway	60,000.00	60,000.00	6,068.00	6,068.00	12,116.00	12,116.00
San Pedro, Los Angeles and Salt Lake Railroad	1,863,400.00	2,163,633.36	54,119.00	54,253.00	24,630.00	24,694.00
Silver Peak Railroad	(^b)				11,428.00	11,428.00
Southern Pacific Company		5,468,633.00				
Tonopah and Goldfield Railroad	43,590.00		10,286.00	9,387.00	21,284.00	21,245.00
Tonopah and Tidewater Railroad	158,237.51	152,181.24	18,984.00	18,984.00	74,086.00	74,086.00
Virginia and Truckee Railroad						
Western Pacific Railway	3,748,125.00	\$,750,000.00	80,089.00	80,127.00	80,089.00	80,045.00
Totals	\$25,899,146.88	\$32,841,971.07				

^aFigures taken from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.^bSouthern Pacific Company unable to report interest paid during year 1912, as all records were destroyed in the Equitable fire of January 9, 1912.

**CAPITAL STOCK AND FUNDED DEBT PER MILE OF ROAD; AND ROAD AND EQUIPMENT INVESTMENT
BEFORE AND SINCE JUNE 30, 1907**

Company	Capital stock and funded debt per mile of road		Total cost of road to June 30, 1907	Total cost of road since June 30, 1907	Total cost of equipment to June 30, 1907	Total cost of equipment since June 30, 1907
	1912	1913				
Atchison, Topeka and Santa Fe Railway	\$59,152.00	\$58,346.00	\$497,096,095.17	\$59,338,928.76		\$49,246,654.68
Bullfrog-Goldfield Railroad	47,064.00	46,887.00		3,647,522.41		145,638.77
Central Pacific Railway	132,785.00	131,240.00	*215,359,896.19	54,400,575.83		826,914.47
Eagle Salt Works Railroad		15,232.00	29,884.19		\$500.00	
Eureka-Nevada Railway ^b	30.00	30.00				
Goldfield Consolidated M. & T. Co.	101,010.10	101,010.10				11,712.18
Las Vegas and Tonopah Railroad	7,528.00	7,528.00	1,947,404.61	882,643.04	146,556.56	133,237.75
Nevada-California-Oregon Railroad	15,152.00	15,093.00	2,655,638.55	1,133,604.25	96,518.37	164,137.92
Nevada Central Railroad	16,078.00	16,078.00	*1,500,000.00			
Nevada Copper Belt Railroad	39,112.61	39,806.34		1,081,046.66		71,822.06
Nevada Northern Railway	18,173.00	18,173.00	1,480,820.56	887,894.56	168,632.36	581,915.86
San Pedro, Los Angeles and Salt Lake Railroad	78,649.00	78,852.00	60,692,700.47	8,352,875.41	5,006,029.92	1,669,588.35
Silver Peak Railroad	11,428.00	11,428.00		168,182.57		41,086.14
Southern Pacific Company				16,769,870.12		2,658,964.66
Tonopah and Goldfield Railroad	31,530.00	30,632.00	*18,230,815.51			
Tonopah and Tidewater Railroad	24,762.00	24,762.00	3,088,235.08	288,337.23	449,118.67	98,136.81
Virginia and Truckee Railroad	74,096.00	74,096.00	3,185,763.42	711,826.20	73,997.76	96,323.72
Western Pacific Railway	160,078.00	160,172.00	4,228,447.67	39,634.77	178,416.00	8,300.13
			101,941,621.78	36,094,067.80	1,699,583.56	2,145,063.08
Totals			\$911,377,273.20	\$183,726,477.11	\$7,718,372.20	\$87,898,405.57

^aIncludes both cost of road and equipment.

^bFigures taken from report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ROAD AND EQUIPMENT INVESTMENT SINCE JUNE 30, 1907, AND TOTAL

Company	Total general expenses July 1, 1907, to June 30, 1912	Total general expenses July 1, 1907, to June 30, 1913	Investment since June 30, 1907		Grand total investment	
			1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$11,907.17	\$11,907.17	\$113,681,341.63	\$135,398,323.53	\$610,767,436.80	\$632,454,424.76
Bullfrog-Goldfield Railroad			3,794,535.04	3,794,535.04	3,794,535.04	3,793,161.18
Central Pacific Railway	107,143.20	252,924.32	48,229,625.96	55,480,414.12	261,379,623.35	270,840,310.31
Eagle Salt Works Railroad ^a						90,334.19
Eureka-Nevada Railway				11,712.18		11,712.18
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	16,719.64	16,719.64	1,028,834.55	1,032,660.43	3,122,795.72	3,126,621.60
Nevada-California-Oregon Railway	1,010.86	1,010.86	1,199,040.84	1,298,753.03	3,950,197.76	4,049,909.96
Nevada Central Railroad					1,500,000.00	1,500,000.00
Nevada Copper Belt Railroad			1,057,949.80	1,102,868.71	1,057,949.80	1,102,868.71
Nevada Northern Railway	634.94	8,523.74	1,452,456.06	1,478,334.16	3,101,928.88	3,127,807.08
San Pedro, Los Angeles and Salt Lake Railroad	68,883.00	66,370.90	5,443,609.41	10,091,834.66	71,142,339.80	76,790,565.06
Silver Peak Railroad			206,537.61	209,168.71	206,537.61	209,168.71
Southern Pacific Company	38,026.37	38,099.48	19,407,112.30	19,466,834.26	37,637,927.81	37,697,649.77
Tonopah and Goldfield Railroad			383,350.32	366,473.04	3,870,704.07	3,853,826.79
Tonopah and Truckee Railroad	122,165.13	122,165.13	940,563.73	928,815.05	4,200,824.91	4,188,576.23
Virginia and Truckee Railway			39,822.65	47,934.90	4,440,336.32	4,454,797.57
Western Pacific Railway	13,851,345.18	13,927,032.37	57,888,384.36	52,166,158.25	161,406,678.70	155,707,388.59
Totals	\$14,226,309.23	\$14,447,763.61	\$254,751,664.26	\$282,843,477.26	\$1,171,578,315.67	\$1,201,939,122.66

^aFigures taken from report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ROAD AND EQUIPMENT, RESERVE ACCRUED FOR DEPRECIATION, NET TOTAL INVESTMENT, AND INVESTMENT PER MILE OF ROAD

Company	Reserve accrued for depreciation		Net total investment		Investment per mile of road	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$12,468,753.57	\$15,203,017.23	\$598,298,633.23	\$617,231,407.47	\$66,454.94	\$67,732.15
Bullfrog-Goldfield Railway	20,947.18	24,532.37	3,773,537.86	3,769,878.81	46,053.68	45,997.55
Central Pacific Railway		847,393.31	261,379,623.35	269,992,917.00	121,549.87	124,463.14
Eagle Salt Works Railway				30,334.19		2,310.30
Eureka-Nevada Railway ^a				11,712.13		139.43
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	39,497.64	46,057.33	3,053,298.08	3,060,563.78	15,473.74	15,460.02
Nevada-California-Oregon Railroad	100,042.78	129,020.66	3,850,154.98	3,920,883.29	16,137.77	16,434.27
Nevada Central Railroad	3,618.00	5,533.00	1,496,332.00	1,494,462.00	16,038.39	16,017.81
Nevada Copper Belt Railroad	8,899.64	18,201.44	1,049,050.16	1,064,667.27	25,296.60	26,155.47
Nevada Northern Railroad	333,913.13	486,470.23	2,769,015.85	2,641,336.55	16,771.13	16,000.34
San Pedro, Los Angeles and Salt Lake Railroad	935,144.99	1,112,940.79	70,157,194.81	74,877,724.23	69,310.22	73,931.66
Silver Peak Railroad			205,537.61	209,168.71	11,745.00	11,932.60
Southern Pacific Company	6,278,194.50	6,155,678.11	31,359,533.31	31,541,371.66	815,373.72	864,049.61
Tonopah and Goldfield Railroad	178,420.61	196,781.87	3,692,233.46	3,557,044.92	36,517.49	36,136.81
Tonopah and Tidewater Railroad	27,937.43	31,240.15	4,172,337.43	4,157,336.03	24,109.48	24,022.51
Virginia and Truckee Railway	23,719.44	35,667.53	4,416,615.88	4,419,129.69	65,450.74	65,487.99
Western Pacific Railway	59,326.30	120,562.60	161,347,362.40	155,596,826.09	173,138.33	166,063.17
Totals	\$20,527,415.21	\$24,413,062.41	\$1,151,080,900.46	\$1,177,596,069.25		

^a Figures taken from report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

INCOME ACCOUNT

Company	Operating revenues		Operating expenses		Net operating revenue or deficit	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$89,553,346.85	\$98,090,754.41	\$57,666,316.02	\$63,890,622.73	\$32,190,080.83	\$34,290,071.68
Bullfrog-Goldfield Railroad	100,163.42	99,083.69	99,367.84	92,786.88	796.58	6,247.86
Central Pacific Railway		602.32		3,550.76		\$ 943.43
Eagle Salt Works Railroad		55,899.01		45,416.76		10,482.26
Eureka-Nevada Railway	91,053.39	87,347.77	23,913.32	28,821.98	62,138.07	58,526.09
Goldfield Consolidated M. & T. Co.	194,549.94	196,713.09	184,363.37	191,606.45	10,186.07	5,206.64
Las Vegas and Tonopah Railroad	\$98,690.06	403,979.10	261,745.14	283,632.40	124,844.91	120,346.70
Nevada-California-Oregon Railroad	69,785.25	54,973.35	47,193.76	47,419.06	12,691.49	7,564.30
Nevada Central Railroad	131,144.62	225,876.52	80,139.81	110,106.87	51,004.71	115,770.36
Nevada Copper Belt Railroad	1,609,862.70	1,644,588.66	710,662.57	797,633.76	799,200.13	847,064.91
Nevada Northern Railway	9,124,474.35	10,238,049.93	7,245,639.80	6,810,510.95	1,878,834.56	3,427,583.98
San Pedro, Los Angeles and Salt Lake Railroad	14,583.61	12,816.79	15,609.60	13,517.17	755.09	701.43
Silver Peak Railroad	90,621,090.27	95,335,314.96	62,013,652.66	54,671,493.80	38,622,507.71	40,663,821.13
Southern Pacific Company	760,442.34	696,337.71	460,070.25	371,064.99	299,772.06	323,312.72
Tonopah and Goldfield Railroad	231,390.69	323,240.57	197,529.61	191,691.47	84,061.18	136,549.10
Tonopah and Tidewater Railroad	508,972.66	299,806.18	218,787.44	212,812.06	91,185.22	86,968.13
Virginia and Truckee Railway	5,236,552.45	6,173,623.29	4,229,864.55	4,478,836.06	1,023,667.88	1,694,785.23
Western Pacific Railway						
Totals	\$198,710,255.37	\$213,944,023.37	\$123,465,091.07	\$132,181,400.45	\$75,245,164.30	\$81,763,622.92

Italic figures denote deficit.

INCOME ACCOUNT

Company	Outside operations— Revenues		Outside operations— Expenses		Outside operations—Net revenues or loss	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railway						
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	\$2,221.55	\$5,670.55	\$1,081.84	\$5,029.95	\$1,139.71	\$559.40
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway						
San Pedro, Los Angeles and Salt Lake Railroad	236,624.56	204,925.55	281,489.24	224,997.19	44,864.69	20,071.64
Silver Peak Railroad						
Southern Pacific Company	10,274,116.66	11,531,236.59	10,077,483.54	10,029,112.80	196,663.12	1,502,135.79
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railway						
Western Pacific Railway	172,115.13	168,967.07	208,276.66	180,602.35	36,161.53	11,635.28
Totals	\$10,685,077.90	\$11,910,861.76	\$10,568,301.28	\$10,440,742.29	\$116,776.62	\$1,470,119.47

Italic figures denote deficit.

INCOME ACCOUNT

Company	Total net revenue or deficit		Taxes accrued		Operating income or loss	
	1912	1913	1912	1913	1912	1913
Archison, Topeka and Santa Fe Railway	\$32,190,030.83	\$34,260,071.68	\$3,556,099.40	\$4,067,431.90	\$23,633,931.43	\$30,192,639.78
Bullfrog-Goldfield Railroad	736.58	6,247.86	7,969.51	7,369.10	7,166.33	1,121.24
Central Pacific Railway			\$1,742,377.45	\$1,812,322.76		
Eagle Salt Works Railroad		2,918.43		1,103.88		8,062.12
Eureka-Nevada Railway		10,529.26		1,429.68		9,373.41
Goldfield Consolidated M. & T. Co.		68,596.09		472.68		58,053.41
Las Vegas and Tonopah Railroad		15,306.64		15,719.70		10,512.04
Nevada-California-Oregon Railway		117,887.80		18,941.32		101,145.98
Nevada Central Belt Railroad		117,554.30		3,686.32		3,855.95
Nevada Copper Belt Railroad		115,770.95		11,174.39		104,596.56
Nevada Northern Railway		847,054.81		77,349.54		769,705.37
San Pedro, Los Angeles and Salt Lake Railroad		3,407,467.81		437,596.17		2,969,871.17
Silver Peak Railroad		1,834,745.04		300,098.33		1,533,956.94
Southern Pacific Company		8,407,701.43		897.11		8,407,778.41
Tonopah and Goldfield Railroad		42,165,006.97		193,816.15		38,501,354.68
Tonopah and Tidewater Railroad		335,312.72		29,982.65		297,668.22
Virginia and Truckee Railroad		186,549.10		18,624.68		121,066.68
Western Pacific Railway		86,986.13		24,353.45		66,831.77
		1,683,157.95		185,233.84		1,405,061.82
Totals	\$75,361,940.92	\$83,232,742.39	\$4,429,692.64	\$5,170,511.77	\$70,932,248.28	\$78,062,230.62

*Not taken into account in totals, as the Central Pacific Railway Company is a nonoperating carrier and the account should show as a debit in the net corporate income and not in operating income.

Italic figures denote deficit.

INCOME ACCOUNT
OTHER INCOME

Company	Rents from lease of road		Hire of equipment		Joint facilities	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	-----	-----	\$447,231.75	\$592,926.86	\$298,936.31	\$227,633.99
Burlingame-Goldfield Railroad	-----	-----	1,164.06	4,486.63	5,665.63	5,665.63
Central Pacific Railroad	-----	-----	-----	-----	-----	-----
Eagle Salt Works Railroad	\$13,866,178.87	\$14,141,394.56	-----	-----	-----	-----
Everett Nevada Railway	-----	-----	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.	-----	-----	33,331.77	-----	-----	-----
Las Vegas and Tonopah Railroad	-----	-----	2,236.37	500.49	-----	-----
Nevada-California-Oregon Railway	-----	-----	-----	-----	-----	-----
Nevada Central Railroad	-----	-----	-----	-----	-----	-----
Nevada Copper Belt Railroad	-----	-----	-----	-----	-----	-----
Nevada Northern Railway	-----	-----	-----	-----	-----	-----
San Pedro, Los Angeles and Salt Lake Railroad	-----	-----	-----	-----	460.16	1,032.36
Silver Peak Railroad	-----	-----	-----	-----	-----	-----
Southern Pacific Company	1,195,588.84	1,196,534.66	-----	-----	313.00	313.00
Tonopah and Goldfield Railroad	-----	-----	-----	-----	-----	-----
Tonopah and Tidewater Railroad	-----	-----	-----	-----	-----	-----
Virginia and Truckee Railroad	-----	-----	-----	-----	-----	83.28
Western Pacific Railway	-----	-----	-----	-----	-----	-----
Totals	\$14,561,762.71	\$15,335,129.62	\$484,063.94	\$574,913.93	\$303,875.00	\$334,730.26

**INCOME ACCOUNT
OTHER INCOME**

Company	Miscellaneous rents		Separately operated properties—Profits		Dividends on stocks controlled	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$65,514.13	\$44,894.06	\$2,851,308.70	\$4,272,076.10	\$383,260.08	\$100,196.00
Central Pacific Railroad						
Eagle Salt Works Railroad	122,604.55	120,591.50				
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.	500.01	500.00				
Las Vegas and Tonopah Railroad	1,634.11	2,175.50				\$80.00
Nevada-California-Oregon Railway						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway				13,339.49		
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company	664.80	619.17		1,816,717.09	16,778,870.94	21,279,768.89
Tonopah and Goldfield Railroad				676.42		
Tonopah and Tidewater Railroad	582.76	579.75				
Virginia and Truckee Railway	17,387.92	23,447.34				
Western Pacific Railway						
Totals	\$208,688.27	\$192,907.32	\$2,851,308.70	\$6,102,869.10	\$17,140,131.02	\$21,880,286.89

* Under heading of "Separately Operated Properties—Profit," is included the revenues from income entitled "Net Profit from Miscellaneous Physical Properties."

**INCOME ACCOUNT
OTHER INCOME**

Company	Interest accrued on funded debt owned or controlled		Interest on other securities, loans and accounts		Miscellaneous incomes	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	7786,380.57	\$430,351.22	\$989,603.56	\$992,837.64	\$260,747.27	\$449,844.47
Bullfrog, Goldfield Railroad			346.71			
Central Pacific Railroad		8,150.00	1,307,971.09	1,403,344.27	341,626.83	515,663.10
Eagle Salt Works Railroad						
Florida Nevada Railway						8,066.43
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad					2,505,023.24	2,847,639.46
Nevada-California-Oregon Railway			506.52	436.44	414.97	
Nevada Central Railroad						415.15
Nevada Copper Belt Railroad						
Nevada Northern Railway			12,436.53	10,421.83		
San Pedro, Los Angeles and Salt Lake Railroad	17,120.00	17,120.00	4,379.75	12,849.38	15,397.05	1,996.26
Silver Peak Railroad						
Southern Pacific Company	4,521,223.33	7,363,233.96	676,945.42		51,512,097.83	
Tonopah and Goldfield Railroad			7,579.90	15,137.59		
Tonopah and Tidewater Railroad			23,736.67	20,059.96	700.19	
Virginia and Truckee Railroad			1,817.80	1,903.61		
Western Pacific Railway			1,967.96	26,504.73		
Totals	\$5,324,723.90	\$7,823,905.18	\$3,027,291.81	\$2,484,495.50	\$4,635,907.38	\$3,823,824.87

•Miscellaneous income for 1913 includes: Income from Sinking and Other Reserve Funds; Release of Premiums on Funded Debt; Contributions from Other Companies; and Miscellaneous Income.
 bIncludes other properties, net income.
 cIncome from other properties, net.

INCOME ACCOUNT
OTHER INCOME AND DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Total other income		Gross corporate income or loss		Rents accrued for lease of other roads	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$6,061,032.37	\$7,487,859.34	\$34,694,993.90	\$37,680,499.12	\$945,280.18	\$1,238,133.00
Bullfrog-Goldfield Railroad	7,176.29	10,154.60	12.36	9,083.36		
Central Pacific Railroad	15,138,276.34	16,189,043.73	13,388,732.27	14,376,730.95	347,230.43	31,134.93
Eagle Salt Works Railroad				3,043.43		
Eucla-Nevada Railway		8,066.43		17,444.84		21,244.87
Goldfield Consolidated M. & T. Co.	2,505,023.24	2,847,639.46	2,565,693.63	2,905,692.87		
Las Vegas and Tonopah Railroad	34,296.75	500.00	25,107.53	10,013.06		
Nevada-California-Oregon Railroad	4,377.00	3,442.43	111,620.32	104,588.41		
Nevada Central Railroad		415.15	8,674.25	4,271.10		
Nevada Copper Belt Railroad			49,407.31	104,596.56		
Nevada Northern Railway	12,436.53	10,421.88	743,271.55	780,127.25		
San Pedro, Los Angeles and Salt Lake Railroad	37,356.96	46,397.49	1,571,339.90	3,016,263.66		
Silver Peak Railroad			1,653.80	1,477.79		
Southern Pacific Company	24,684,726.36	31,658,604.60	63,290,081.04	73,638,068.45	37,427,773.15	39,562,133.74
Tonopah and Goldfield Railroad	9,257.89	17,746.18	279,047.30	315,312.40		
Tonopah and Tidewater Railroad	23,736.67	20,059.96	99,173.27	141,126.64		
Virginia and Truckee Railroad	2,400.55	2,483.96	69,232.32	65,469.30		
Western Pacific Railway	19,355.76	50,035.35	826,628.29	1,455,097.17		
Totals	\$48,639,452.73	\$58,352,869.96	\$117,722,156.94	\$134,602,777.80	\$38,720,323.76	\$40,842,646.54

Italic figures denote deficit.

INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Hire of equipment		Joint facilities		Miscellaneous rents	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....					\$73,898.20	\$92,492.76
Bullfrog-Goldfield Railroad.....						
Central Pacific Railway.....					61,381.01	74,611.23
Eagle Salt Works Railroad.....						
Eureka-Nevada Railway.....						
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....						
Nevada-California-Oregon Railway.....		\$1,979.83		43.00		
Nevada Central Railroad.....					102.48	214.00
Nevada Copper Belt Railroad.....	\$3,467.02	2,794.21				
Nevada Northern Railway.....	18,444.99	21,841.42				
San Pedro, Los Angeles and Salt Lake Railroad.....	164,800.56	151,997.20	1,062.82	1,042.35		25.00
Silver Peak Railroad.....			208,181.70	190,987.80	25.00	
Southern Pacific Company.....						
Tonopah and Goldfield Railroad.....	2,383.10	3,237.71				423,014.96
Tonopah and Tidewater Railroad.....	3,695.47	6,704.88	7,211.82	4,683.63	6.00	2.00
Virginia and Truckee Railway.....	4,462.97	6,013.64	5,670.53	5,674.18		
Western Pacific Railway.....	203,495.43	302,281.67	28,514.49	57,083.03	29,212.48	47,778.60
Totals.....	\$400,949.54	\$496,850.56	\$744,625.65	\$819,404.60	\$164,590.17	\$638,123.57

INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Separately operated prop- erties—Loss		Interest accrued on funded debt		Other Interest	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	-----	-----	\$13,355,315.87	\$13,621,770.76	\$394.26	\$1,331.75
Bullfrog-Goldfield Railroad	-----	-----	13,470.00	52,450.00	23,453.69	19,649.32
Central Pacific Railway	-----	-----	7,334,756.94	8,761,172.41	-----	1,308.88
Eagle Salt Works Railroad	-----	655,739.40	-----	-----	-----	-----
Eureka-Nevada Railway	-----	-----	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.	-----	-----	-----	-----	-----	-----
Las Vegas and Tonopah Railroad	-----	-----	41,813.90	48,047.23	29,334.09	23,673.97
Nevada-California-Oregon Railway	-----	-----	-----	-----	4,190.57	5,964.70
Nevada Central Railroad	-----	-----	70,335.84	37,320.00	10,251.33	18,415.10
Nevada Copper Belt Railroad	-----	-----	50,000.00	50,000.00	-----	-----
San Pedro, Los Angeles and Salt Lake Railroad	-----	-----	2,027,133.35	2,206,200.00	167,717.09	61,370.71
Silver Peak Railroad	-----	-----	-----	-----	-----	-----
Southern Pacific Company	178,621.01	19,625.10	5,413,652.99	5,655,138.76	-----	-----
Tonopah and Goldfield Railroad	-----	-----	43,690.00	86,970.00	447.10	1,648,641.45
Tonopah and Tidewater Railroad	-----	-----	155,810.16	152,181.24	1,805.00	10.91
Virginia and Truckee Railway	-----	-----	-----	-----	-----	-----
Western Pacific Railway	-----	-----	3,748,245.97	3,752,281.25	98,301.70	681,804.33
Totals -----	\$203,334.34	\$25,364.50	\$32,259,085.03	\$34,276,531.65	\$336,395.43	\$2,458,676.22

* Account of other properties, net loss.
Includes net loss on miscellaneous physical property.

INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Sinking funds chargeable to income ^a		Other deductions ^b		Total deductions from gross corporate income	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway			\$166,247.75	\$125,154.50	\$15,034,752.55	\$15,197,490.38
Burlington Railroad					72,412.32	72,412.32
Centennial Pacific Railway					37,236.86	37,236.86
Central Pacific Railway	\$51,000.00		852,763.29	1,027,065.04	8,647,171.67	9,899,723.01
Elgin, Salt Lake and Western Railway					1,306.98	1,306.98
Enterprise Nevada Railway					21,944.87	21,944.87
Goldfield Consolidated M. & T. Co.					786,840.83	786,840.83
Las Vegas and Tonopah Railroad					31,701.80	31,701.80
Nevada-California Oregon Railway	9,710.00		5246.02		54,504.83	54,504.83
Nevada Central Railroad	453.00		278.90			
Nevada Copper Belt Railroad			489,582.49			
Nevada Northern Railway					22,934.09	22,934.09
Piedro Los Angeles and Salt Lake Railroad					56,092.97	56,092.97
Silver Peak Railroad			\$20,185.00	75,505.59	173,807.28	173,807.28
Southern Pacific Company	5,000.00		148,183.94	113,231.80	69,527.61	69,527.61
Tonopah and Goldfield Railroad	78,925.00		7,500.00	140,083.02	2,612,256.03	2,612,256.03
Tonopah and Tidewater Railroad			1,705.28	1,707.23	43,178,141.09	47,412,825.83
Virginia and Truckee Railway					140,083.02	140,083.02
Western Pacific Railway			3341.09	2,312.50	168,896.44	168,297.63
					4,462.97	4,462.97
					4,108,601.16	4,843,551.38
Totals	\$144,635.00		\$1,287,177.86	\$2,144,197.39	\$74,280,866.77	\$81,700,850.03

^aSinking funds chargeable to income carried under heading of "Miscellaneous Appropriations out of Net Income" for the year 1913.

^bOther deductions include the following accounts for 1913: Miscellaneous Tax Accruals; Amortization of Discount on Funded Debt; Transfer of Income to Other Companies; and Miscellaneous Deductions.

^cExtinguishment of discount on securities.

^dIncludes extinguishment of discount on securities.

INCOME ACCOUNT
NET CORPORATE INCOME AND DISPOSITION OF NET INCOME

Company	Net corporate income or loss		Dividends declared on preferred stock		Dividends declared on common stock	
	1912	1913	1912	1913	1912	1913
Atchafon, Toiyabe and Santa Fe Railway	\$19,680,241.25	\$22,143,008.74	\$5,708,680.00	\$5,708,680.00	\$10,168,185.00	\$10,898,780.00
Bullfrog-Goldfield Railroad	37,254.33	53,373.86				
Central Pacific Railway	4,741,680.60	4,476,997.94				
Eagle Salt Works Railroad		4,877.47				
Eureka-Nevada Railway		3,800.03				
Goldfield Consolidated M. & T. Co.	2,566,688.63	2,106,832.04				
Las Vegas and Tonopah Railroad	4,725.56	41,714.88				
Nevada-California-Oregon Railway	55,457.36	50,063.58				
Nevada Central Railroad	8,121.25	4,271.10				
Nevada Copper Belt Railroad	124,199.87	46,967.25				
Nevada Northern Railway	673,743.94	707,243.43				
San Pedro, Los Angeles and Salt Lake Railroad	1,040,916.13	340,182.86			600,000.00	625,000.00
Silver Peak Railroad	1,653.20	26,295,377.79				
Southern Pacific Company	20,111,839.86	288,347.15			16,860,344.32	16,860,344.32
Tonopah and Goldfield Railroad	138,864.25	288,347.15				
Tonopah and Tidewater Railroad	59,513.37	62,145.66				
Virginia and Truckee Railway	64,769.35	62,145.66			50,000.00	50,000.00
Western Pacific Railway	3,297,972.87	3,538,434.21				
Totals	\$48,461,900.37	\$52,901,927.77	\$5,708,680.00	\$5,708,680.00	\$27,178,529.32	\$27,434,124.32

Italic figures denote deficit.

**INCOME ACCOUNT
DISPOSITION OF NET INCOME**

Company	Additions and betterments charged to income		Miscellaneous appropriations		Balance carried forward to profit and loss	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$3,300,000.00	\$5,574,433.63	\$336,959.94	\$461,105.11	\$86,406.31	-----
Butte and Anaconda Railway	-----	-----	-----	-----	37,824.32	\$53,573.95
Central Pacific Railway	-----	-----	-----	59,796.10	4,741,560.60	4,417,201.84
Great Salt Works Railway	-----	-----	-----	-----	-----	1,877.41
Great Northern Railway	-----	-----	-----	-----	2,566,688.63	2,106,882.04
Goldfield Consolidated M. & T. Co.	-----	-----	-----	-----	1,729.56	11,714.86
Las Vegas and Tonopah Railroad	-----	-----	-----	14,080.00	55,437.35	36,003.58
Nevada-California-Oregon Railway	-----	-----	-----	-----	8,121.25	4,271.10
Nevada Central Railroad	-----	-----	-----	-----	184,199.97	46,067.25
Nevada Copper Belt Railroad	-----	-----	-----	-----	73,743.74	82,243.48
Nevada Northern Railway	-----	-----	-----	-----	1,040,916.13	340,182.36
San Pedro, Los Angeles and Salt Lake Railroad	-----	-----	-----	-----	1,653.20	1,477.79
Silver Peak Railroad	-----	-----	-----	-----	-----	-----
Southern Pacific Company	-----	-----	-----	50,000.00	8,761,595.68	9,859,915.30
Tonopah and Goldfield Railroad	-----	-----	-----	90,200.00	138,984.28	178,147.15
Tonopah and Tidewater Railroad	-----	-----	-----	-----	69,513.17	55,140.89
Virginia and Truckee Railway	-----	-----	-----	-----	14,769.35	12,455.66
Western Pacific Railway	-----	-----	-----	-----	3,231,973.97	3,235,454.21
Totals	\$3,300,000.00	\$5,574,433.63	\$336,959.94	\$675,151.21	\$6,877,130.91	\$13,554,498.61

Italic figures denote deficit.

PROFIT AND LOSS ACCOUNT

Company	Balance carried forward to profit and loss		Dividends declared out of surplus		Balance, credit or debit, on June 30	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$86,408.31	\$63,378.96			\$80,470,115.99	\$20,569,800.81
Bullfrog-Goldfield Railroad	37,224.33	4,417,201.84			371,454.94	435,817.64
Central Pacific Railway	4,741,960.60	4,877.41	\$4,728,580.00	\$7,540,680.00	21,832,891.31	22,062,463.36
Eagle Salt Works Railroad		3,800.03			10,656.36	16,110.04
Eureka-Nevada Railway		41,714.86			2,864.56	945.48
Goldfield Consolidated M. & T. Co.	2,565,668.63	2,106,852.04	3,284,163.49	2,041,282.88	777,782.03	843,351.19
Las Vegas and Tonopah Railroad	4,728.48	36,003.58			23,770.02	73,614.60
Nevada-California-Oregon Railway	66,467.38	4,271.10		15,000.00	273,254.92	269,103.96
Nevada Central Railroad	8,121.25	46,067.25			21,167.60	25,423.60
Nevada Copper Belt Railroad	124,789.97	32,263.48			186,294.21	80,468.18
Nevada Northern Railway	73,743.74	340,182.36			315,336.34	337,573.82
San Pedro, Los Angeles and Salt Lake Railroad	1,040,216.13	9,859,918.30			4,064,745.59	3,680,768.48
Silver Peak Railroad	1,624.80	9,859,918.30			781.91	75,948,608.38
Southern Pacific Company	3,751,635.80	178,147.16		150,500.00	66,889,703.32	88,608,308.38
Tonopah and Goldfield Railroad	138,894.58	12,465.66			782,812.00	785,922.76
Tonopah and Tidewater Railroad	14,768.35		25,000.00		576,234.80	362,196.73
Virginia and Truckee Railway		3,383,454.21			578,071.46	390,613.80
Western Pacific Railway	3,231,972.37				3,231,972.37	6,662,723.13
Totals	\$6,377,120.91	\$13,554,498.61	\$8,037,693.49	\$9,772,322.88	\$102,803,017.32	\$109,278,423.17

Dividends out of surplus in 1912: Central Pacific Railway, preferred 4 per cent, common 10 per cent.

Goldfield Consolidated M. & T. Co., common 1 per cent.
Virginia and Truckee Railway, common 1/2 per cent.

Dividends out of surplus in 1913: Central Pacific Railway, preferred 20 1/4 per cent, common 6 per cent.

Goldfield Consolidated M. & T. Co., common 1 per cent.

Nevada-California-Oregon Railway, preferred 2 per cent.

Tonopah and Goldfield Railroad, preferred 7 per cent, common 7 per cent.

Virginia and Truckee Railway, common 1/2 per cent.

Italic figures denote deficit.

OPERATING REVENUES—TOTAL

Company	Freight revenue		Passenger revenue		Excess baggage revenue	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a	\$1,152.07	\$1,318.89	\$597.78	\$447.74	\$4.78	\$2.08
Bullfrog-Goldfield Railroad	73,177.75	71,966.01	18,993.06	18,920.12	192.06	149.87
Central Pacific Railway						
East-Salt Works Railroad		602.32				
Eureka-Nevada Railway		89,317.77		18,774.55		70.61
Goldfield Consolidated M. & T. Co.		87,347.77				
Las Vegas and Tonopah Railroad	91,056.39		35,668.30	35,014.37	515.73	620.20
Nevada-California-Oregon Railway	143,746.78	147,044.22	142,912.28	143,586.35	1,178.76	1,358.02
Nevada Central Railroad	210,761.38	225,575.20	17,274.41	14,463.71	103.60	371.56
Nevada Copper Belt Railroad	38,861.83	31,556.94	20,280.53	26,947.90	1,486.48	1,968.47
Nevada Northern Railway	104,871.29	131,573.39	136,427.86	173,281.50	1,022.68	1,968.16
Nevada Southern Railway	1,336,093.11	1,428,572.64	3,011,570.69	3,137,233.99	43,276.62	47,168.12
San Pedro, Los Angeles and Salt Lake Railroad	5,536,093.11	6,341,976.31	4,325.37	3,877.19	396,450.56	399,845.24
Silver Peak Railroad	8,569.88				1,764.66	1,992.08
Southern Pacific Company	62,944,793.08	56,399,870.16	31,279,921.69	32,092,877.13	1,413.81	1,819.79
Tonopah and Goldfield Railroad	617,321.28	556,830.71	102,494.13	106,661.66	1,764.66	1,992.08
Tonopah and Tidewater Railroad	227,745.75	266,992.95	53,192.41	48,198.11	1,413.81	1,819.79
Virginia and Truckee Railway	207,100.83	202,111.81	86,713.30	81,692.58	1,231.31	1,119.79
Western Pacific Railway	3,995,719.12	4,635,630.55	1,133,608.69	1,854,082.72	8,700.11	10,338.80
Totals	\$65,458,264.35	\$70,618,688.14	\$36,041,340.62	\$37,182,292.26	\$456,067.73	\$465,258.88

^aOperating revenues for Atchison, Topeka and Santa Fe are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL

Company	Parlor and chair car revenue		Mail revenue		Express revenue	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a			\$504.34	\$215.78	\$309.16	\$343.48
Bullfrog-Goldfield Railroad.....			5,652.90	5,652.87	887.33	772.79
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....						
Eureka-Nevada Railroad.....						
Goldfield Consolidated M. & T. Co.....				89.86		568.18
Las Vegas and Tonopah Railroad.....			8,454.74	8,348.32	2,454.27	2,934.14
Nevada-California-Oregon Railroad.....			19,672.47	21,071.16	8,667.30	9,081.78
Nevada Central Railroad.....			4,099.91	6,613.98	1,456.17	1,335.97
Nevada Copper Belt Railroad.....			1,308.33	1,989.64	1,212.21	2,813.63
Nevada Northern Railroad.....		\$974.50	12,707.00	12,706.00	9,064.18	9,741.82
San Pedro, Los Angeles and Salt Lake Railroad.....	\$1,901.35	1,568.30	154,110.11	152,665.41	176,183.13	214,231.83
Silver Peak Railroad.....			749.40	750.51	292.99	257.19
Southern Pacific Company.....	5,713.00	9,249.35	1,994,133.83	1,944,072.11	1,961,260.20	2,151,480.84
Tonopah and Goldfield Railroad.....			12,214.00	12,212.05	16,862.22	16,436.34
Tonopah and Tidewater Railroad.....			13,282.61	13,247.76	3,381.21	2,014.95
Virginia and Truckee Railroad.....			5,185.01	5,186.01	8,543.17	7,497.99
Western Pacific Railroad.....			17,112.97	22,415.26	85,917.47	88,741.86
Totals	\$7,614.35	\$11,792.15	\$2,249,979.70	\$2,207,416.72	\$2,275,496.01	\$2,508,327.79

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL

Company	Milk revenue on passenger trains		Other passenger train revenue		Total passenger service train revenue	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a					\$1,416.06	\$1,309.08
Bullfrog-Goldfield Railroad					25,725.35	25,496.65
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway						
San Pedro, Los Angeles and Salt Lake Railroad	\$27,430.99	\$32,076.48				14,523.20
Silver Peak Railroad			\$8.75		47,101.79	46,927.03
Southern Pacific Company					172,430.81	175,186.51
Tonopah and Goldfield Railroad					22,984.09	22,575.51
Tonopah and Tidewater Railroad					23,237.56	31,996.34
Virginia and Truckee Railroad					162,711.54	199,348.89
Western Pacific Railway					8,432,762.65	3,686,266.64
			809.80		5,178.88	4,694.73
			19,289.76		35,908,708.79	37,111,571.71
			204,703.83		133,514.51	137,238.83
	66,366.60	65,611.22	160.15		60,807.60	58,767.62
			25.00		100,704.93	96,408.37
			108.35		1,251,447.59	1,475,667.89
Totals	\$83,797.59	\$97,687.70	\$225,095.64	\$614,204.00	\$41,348,681.64	\$43,086,979.50

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL

Company	Switching revenue		Special service train revenue		Miscellaneous transportation revenue	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway*		\$5.00				
Bullfrog-Goldfield Railroad	\$880.00	1,200.00				
Central Pacific Railroad						
Eagle Salt Works Railroad				\$142.50		\$1,170.29
Eureka-Nevada Railroad						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	2,100.00	1,948.00	\$788.00			
Nevada-California-Oregon Railway	500.00	680.00	300.00			
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway	3,560.75	10,617.50			\$1,527.11	
San Pedro, Los Angeles and Salt Lake Railroad	1,548.25	1,728.50		423.20		
Silver Peak Railroad	49,734.96	66,376.73	16,853.00	17,302.60	735.70	1,369.33
Southern Pacific Company						
Tonopah and Goldfield Railroad	459,302.35	532,289.45	41,009.09	28,221.64	\$70,591.13	\$76,337.97
Tonopah and Tidewater Railroad	4,367.00	4,663.50	615.20	488.00		
Virginia and Truckee Railroad	8.00				5.00	
Western Pacific Railroad	72.50	190.00	969.70	1,239.70		
	12,040.86	14,709.80	29,763.45	13,857.16	781.44	92.50
Totals	\$559,328.76	\$634,385.43	\$90,288.44	\$61,674.80	\$370,586.16	\$378,960.09

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

Italic figures denote deficit.

OPERATING REVENUES—TOTAL

Company	Total revenue from transportation		Station and train privileges		Parcel room receipts	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a	\$2,573.13	\$2,627.97				
Builtfrog-Goldfield Railroad	99,783.10	98,661.66				
Central Pacific Railroad		602.32				
Eagle Salt Works Railroad		55,158.76				
Eureka-Nevada Railway	91,056.39	87,347.77				
Goldfield Consolidated M. & T. Co.	193,786.57	186,919.25				
Las Vegas and Tonopah Railroad	383,692.19	401,565.71	\$135.00	\$180.00		
Nevada-California-Oregon Railway	59,095.42	54,132.45				
Nevada Central Railroad	129,532.48	224,187.23				
Nevada Copper Belt Railroad	1,500,147.90	1,629,570.73	25.00			\$306.25
Nevada Northern Railroad	9,020,163.69	10,112,804.80	8,499.90			
San Pedro, Los Angeles and Salt Lake Railroad	14,772.21	12,670.04				
Silver Peak Railroad	89,749,002.44	94,448,370.93	149,869.24	178,621.21	\$29,422.20	30,379.10
Southern Pacific Company	756,437.97	693,222.04	675.00	600.00	84.90	61.50
Tonopah and Goldfield Railroad	288,568.35	325,040.57				
Tonopah and Tidewater Railroad	308,837.96	298,947.88				
Virginia and Truckee Railway	5,229,752.55	6,139,957.90	.45	1,426.19	251.18	213.93
Western Pacific Railway						
Totals	\$107,827,147.35	\$114,790,788.01	\$159,204.59	\$189,235.57	\$29,758.28	\$30,962.78

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL.

Company	Storage—Freight		Storage—Baggage		Car service	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway*	83.12	820.39	\$4.05	\$1.50	\$100.00	\$84.00
Bullfrog-Goldfield Railroad	15.42	38.60			55.00	52.00
Central Pacific Railroad						
Eagle Salt Works Railroad		14.33				65.50
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.	63.34	73.21	59.55	2.65	136.00	142.00
Las Vegas and Tonopah Railroad	47.23	87.70	131.20	96.50	144.00	12.00
Nevada-California-Oregon Railway						
Nevada Central Railroad						
Nevada Copper Belt Railroad	4.47	79.39	84.15	4.82	1,396.00	1,375.00
Nevada Northern Railway	114.86	83.54	71.30	151.90	1,986.00	4,424.00
San Pedro, Los Angeles and Salt Lake Railroad	1,767.63	2,637.62	6,497.30	6,623.30	21,531.34	23,061.51
Silver Peak Railroad						58.75
Southern Pacific Company	19,597.25	26,511.17	62,555.17	62,927.10	56,555.85	117,613.50
Tonopah and Goldfield Railroad	256.35	166.63	238.00	288.06	1,231.00	1,374.00
Tonopah and Tidewater Railroad	141.16	139.46			128.00	25.00
Virginia and Truckee Railroad	198.21	635.45	30.55	57.30	116.00	210.00
Western Pacific Railway	515.53		2,149.25	2,377.55	3,610.00	8,392.00
Totals	\$21,613.37	\$30,496.81	\$71,822.42	\$72,524.77	\$116,900.79	\$162,895.36

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL

Company	Telegraph and telephone service		Rents of buildings and other property		Miscellaneous	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway*	\$180.39	\$238.75	\$10.00	\$31.25	\$12.65	\$42.05
Bullfrog-Goldfield Railroad			300.00	180.00	6.90	101.43
Central Pacific Railway						
Central Salt Works Railroad		65.00		284.00		311.42
Eureka-Nevada Railway					3,586,127.96	2,847,639.46
Goldfield Consolidated M. & T. Co.	518.42	551.90	17.00	19.00	19.06	5.06
Las Vegas and Tonopah Railroad			1,380.25	780.00	1,060.18	1,219.19
Nevada-California-Oregon Railroad					122.28	341.43
Nevada Central Railroad	567.55	449.47			127.42	280.08
Nevada Copper Belt Railroad						
Nevada Northern Railway	7,461.54	10,280.49	46.00	78.00		30,762.25
San Pedro, Los Angeles and Salt Lake Railroad	7,764.18	7,731.12	8,665.30	10,865.88	23,634.15	
Silver Peak Railroad			80.00	60.00		
Southern Pacific Company	73,584.04	77,832.08	161,775.21	172,367.66	170,306.35	182,026.30
Tonopah and Goldfield Railroad			1,437.58	564.00	80.94	151.44
Tonopah and Tidewater Railroad	1,808.80	1,693.69	829.38	1,002.49	140.05	465.76
Virginia and Truckee Railroad					789.24	443.63
Western Pacific Railroad			11,036.04	13,547.24	7,210.15	2,986.05
Totals	\$91,854.92	\$96,837.50	\$185,576.71	\$199,779.52	\$3,789,537.33	\$3,066,764.47

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

OPERATING REVENUES—TOTAL.

Company	Total revenue from operation other than transportation		Total operating revenues, entire line	
	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a	\$315.21	\$392.94	\$389,856,346.85	\$38,080,754.41
Bullfrog-Goldfield Railroad.....	880.32	\$72.08	100,163.42	99,083.69
Central Pacific Railroad.....				
Eagle Salt Works Railroad.....				
Eureka-Nevada Railway.....				
Goldfield Consolidated M. & T. Co.....	3,586,127.96	740.25	3,677,154.35	55,889.01
Las Vegas and Tonopah Railroad.....	4,780.11	2,847,987.23	2,934,987.23	2,934,987.23
Nevada-California-Oregon Railroad.....	813.37	783.84	194,549.94	196,713.09
Nevada Central Railroad.....	4,780.11	2,413.39	596,580.05	408,979.10
Nevada Copper Belt Railroad.....	689.83	840.80	59,795.25	54,973.35
Nevada Northern Railway.....	1,612.04	1,689.29	131,144.52	225,876.52
San Pedro, Los Angeles and Salt Lake Railroad.....	9,714.80	15,017.88	1,509,962.70	1,644,588.65
Silver Peak Railroad.....	78,261.00	96,473.20	9,124,474.35	b10,238,049.93
Southern Pacific Company.....	81.80	145.75	14,853.51	12,815.79
Tonopah and Goldfield Railroad.....	752,666.31	848,283.12	90,621,080.27	c95,335,314.96
Tonopah and Tidewater Railroad.....	4,004.37	3,175.67	760,442.34	696,397.71
Virginia and Truckee Railroad.....	2,827.34	3,200.00	291,380.69	328,240.57
Western Pacific Railroad.....	1,134.70	860.80	309,972.66	299,806.18
Totals.....	24,772.60	29,587.71	5,258,532.43	d6,173,628.29
	\$4,463,979.88	\$3,851,973.55	\$202,296,383.33	\$216,791,662.83

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for the operations in Nevada only.^bJoint facilities, credit of \$28,771.93 included in total.^cJoint facilities, credit of \$55,546.92 and debit of \$16,885.99 accounted for in total.^dJoint facilities, credit of \$4,082.68 included in total.

STOCKS AND BONDS OWNED

Company	Total par value of stocks owned		Dividends accrued on stocks owned		Funded debt owned	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$239,194,000.58	\$120,641,899.90	\$363,280.08	\$100,195.00	\$149,123,125.86	\$86,495,930.91
Bullfrog-Goldfield Railroad					40,000.00	
Central Pacific Railway	5,439,700.00	5,940,200.00			172,150.00	171,150.00
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	275,369.00	271,000.00		330.00		401,000.00
Nevada Central Railroad						
Nevada Copper Belt Railroad						500,000.00
Nevada Northern Railway	50,383.00	50,223.00			428,000.00	
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	658,961,532.73	665,663,132.73	16,778,870.94	21,279,768.89	118,820,204.00	145,957,902.03
Southern Pacific Company					350,000.00	350,000.00
Tonopah and Goldfield Railroad					350,000.00	350,000.00
Tonopah and Goldwater Railroad						
Virginia and Truckee Railway	499,900.00	500,400.00				
Western Pacific Railway						
Totals	\$804,420,875.31	\$793,076,855.63	\$17,142,131.02	\$21,380,268.89	\$269,233,479.86	\$234,693,982.94

STOCKS AND BONDS OWNED

Company	Interest accrued on funded debt owned		Miscellaneous securities owned		Dividends or interest on miscellaneous securities	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$796,390.57	\$430,351.22				
Bullfrog-Goldfield Railroad						
Central Pacific Railroad		8,150.00				
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway						
San Pedro, Los Angeles and Salt Lake Railroad	17,120.00	17,120.00				
Silver Peak Railroad						
Southern Pacific Company	4,521,223.33	7,968,288.96	\$14,623,315.84	\$315,000.00	\$746,954.86	
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railway				1,400.00		
Western Pacific Railway						
Totals	\$5,324,723.90	\$7,823,905.18	\$14,623,315.84	\$315,400.00	\$746,954.86	

SINKING, INSURANCE AND OTHER FUNDS

Company	Sinking, insurance and other funds—Cash to funds		Sinking, insurance and other funds—Total		Sinking, insurance and other funds—Cash in funds	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$350,227.83	\$403,171.73	\$396,952.94	\$461,105.11	\$1,827,272.53	\$1,726,846.19
Bullfrog-Goldfield Railroad	17,425.00	17,425.00	17,425.00	17,425.00		
Central Pacific Railway	51,000.00	51,000.00	66,448.70	59,796.10	474,255.89	176,623.27
Exide Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield and Tonopah R.R. & T. Co.						
Las Vegas and Tonopah Railroad	9,710.00	14,150.00	9,710.00	14,150.00	29.46	154.18
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company	5,000.00	5,000.00	5,000.00	5,000.00	635.41	
Tonopah and Goldfield Railroad	78,925.00	90,200.00	78,925.00	90,200.00		
Tonopah and Tidewater Railroad	17,652.49	17,625.34	17,652.49	17,625.34		140,890.19
Virginia and Truckee Railroad						
Western Pacific Railroad						
Totals	\$529,940.32	\$598,572.07	\$591,116.13	\$665,801.55	\$2,302,193.34	\$2,044,519.83

SINKING, INSURANCE AND OTHER FUNDS, OPERATING EXPENSES—MAINTENANCE OF WAY AND STRUCTURES

Company	Sinking, insurance and other funds—Total in funds		Superintendence		Maintenance of roadway and track	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$1,827,272.53	\$1,726,846.19	\$380,541.82	\$946,145.16	\$9,008,386.33	\$10,410,406.16
Bullfrog-Goldfield Railroad			1,987.02	1,998.82	18,679.69	20,891.01
Central Pacific Railroad	6,141,726.39	5,844,099.77		42.61		526.99
Eagle Salt Works Railroad				813.13		13,760.02
Eureka-Nevada Railway			160.00		4,998.68	4,186.19
Goldfield Consolidated M. & T. Co.			2,159.23	2,117.23	30,760.77	40,698.62
Las Vegas and Tonopah Railroad			3,068.49	6,158.16	84,274.88	76,916.50
Nevada-California-Oregon Railway	29.46	154.18	300.00	280.00	10,786.65	10,382.64
Nevada Central Railroad			146.18	1,441.54	9,854.24	10,150.74
Nevada Copper Belt Railroad			7,116.17	6,897.26	124,795.97	144,802.68
Nevada Northern Railway			82,870.74	79,178.46	790,977.99	794,601.83
San Pedro, Los Angeles and Salt Lake Railroad					1,613.81	1,496.62
Silver Peak Railroad			636.41	674,942.91	6,490,965.16	6,404,678.23
Southern Pacific Company			9,872.62	9,200.82	67,108.07	48,462.15
Tonopah and Goldfield Railroad			5,969.48	4,878.68	33,086.39	33,937.64
Tonopah and Tidewater Railroad	123,264.85	140,890.19	4,200.00	4,200.00	45,046.77	41,700.21
Virginia and Truckee Railroad			89,580.07	98,069.15	507,123.89	506,323.18
Western Pacific Railroad						
Totals	\$8,092,923.69	\$7,711,990.33	\$1,727,726.04	\$1,836,033.43	\$17,228,468.29	\$18,562,346.31

**OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES**

Company	Maintenance of track structures		Maintenance of buildings, docks and wharves		Injuries to persons	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$1,945,033.80	\$1,638,943.98	\$1,286,519.14	\$1,378,380.85	\$45,024.29	\$55,813.02
Bullfrog-Goldfield Railroad	1,653.54	932.93	1,219.15	930.86		
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway	39.25	150.83		905.95		
Goldfield Consolidated M. & T. Co.	1,769.42	1,095.90		15.22		
Las Vegas and Tonopah Railroad	4,250.85	2,310.67	3,322.00	2,545.56		2.00
Nevada-California-Oregon Railroad	467.21	2,773.47	5,293.89	3,371.31		
Nevada Central Railroad	1,080.85	1,301.81	1,427.71	1,582.85	237.40	
Nevada Copper Belt Railroad	11,270.16	754.12	768.08	170.05		25.37
Nevada Northern Railway		31,436.95	17,451.56	3,715.82		
San Pedro, Los Angeles and Salt Lake Railroad	119,578.34	76,511.27	133,746.92	102,017.90	3,617.04	625.89
Silver Peak Railroad						
Southern Pacific Company	1,498,822.62	1,509,768.46	1,198,511.10	1,273,600.49	28,769.30	40,295.01
Tonopah and Goldfield Railroad	1,319.54	1,615.65	2,542.74	3,759.47	2,252.92	736.07
Tonopah and Tidewater Railroad	4,402.72	5,895.13	2,868.59	2,163.93	3.58	6.64
Virginia and Truckee Railroad	5,326.61	4,902.26	4,812.48	6,315.54		100.00
Western Pacific Railway	280,829.31	241,970.67	53,608.73	65,376.55	1,602.23	5,330.27
Totals	\$3,875,344.22	\$3,519,864.05	\$2,712,092.09	\$3,344,852.88	\$79,506.76	\$102,934.27

**OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES**

Company	Other maintenance of way expenses		Maintenance of joint track—Debit		Maintenance of joint track—Credit	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$201,404.05	\$274,447.08	\$141,582.76	\$173,545.37	\$161,201.50	\$138,503.26
Bullfrog-Goldfield Railroad	1,024.07	662.32	961.96	939.00	1,712.39	1,915.61
Central Pacific Railway	---	---	---	---	---	---
Eagle Salt Works Railway	---	---	---	---	---	---
Elgin-Nevada Railway	---	---	---	---	---	---
Goldfield Consolidated M. & T. Co.	---	---	---	---	---	---
Las Vegas and Tonopah Railroad	---	---	---	---	---	---
Nevada-California-Oregon Railroad	3,815.04	1,334.54	---	10.00	---	---
Nevada Central Railroad	1,376.88	235.19	---	---	---	---
Nevada Copper Belt Railroad	---	---	---	---	---	---
Nevada Northern Railway	44.16	204.70	146.37	164.04	---	---
San Pedro, Los Angeles and Salt Lake Railroad	5,223.01	47.00	---	---	---	---
Silver Peak Railroad	29,626.22	25,570.36	95,194.42	94,802.60	1,922.41	2,442.72
Southern Pacific Company	233,875.75	317,021.00	143,798.50	53,395.00	108,153.05	121,851.91
Tonopah and Goldfield Railroad	2,060.79	1,946.97	4,497.04	3,040.80	931.96	939.00
Tonopah and Tidewater Railroad	1,503.38	1,741.99	1,712.39	2,233.09	41.34	6.32
Virginia and Truckee Railway	949.21	791.95	---	---	---	---
Western Pacific Railway	18,817.89	19,878.75	2,296.79	2,490.33	979.13	855.73
Totals	\$499,211.45	\$645,276.65	\$390,180.23	\$330,640.33	\$274,961.78	\$266,518.05

Italic figures denote credit.

OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES, AND MAINTENANCE OF EQUIPMENT

Company	Total—Maintenance of way and structures		Superintendence		Locomotives—Repairs	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$13,947,319.39	\$15,239,198.31	\$498,123.41	\$477,472.80	\$6,203,481.65	\$6,890,183.82
Bullfrog-Goldfield Railroad	23,803.04	24,378.83	1,838.03	1,839.38	11,850.10	3,382.42
Central Pacific Railway						
Eagle Salt Works Railroad		759.33		77.41		98.36
Eureka-Nevada Railway		16,081.97		944.84		1,678.86
Goldfield Consolidated M. & T. Co.	5,182.93	8,287.91	150.00		1,242.63	1,687.12
Las Vegas and Tonopah Railroad	41,827.46	48,888.87	1,484.91	1,842.17	13,307.79	16,277.88
Nevada-California-Oregon Railway	38,524.89	38,904.33	2,114.90	2,141.73	14,662.64	13,868.83
Nevada Central Railroad	13,378.86	13,841.14			4,222.32	8,778.34
Nevada Copper Belt Railroad	12,038.86	12,910.57	724.18	1,213.22	4,222.32	8,978.34
Nevada Northern Railway	155,886.87	186,489.77	5,406.70	5,402.71	48,032.44	59,832.77
New York, Los Angeles and Salt Lake Railroad	1,253,696.96	1,170,885.59	60,806.44	65,073.41	1,185,712.40	998,892.15
Silver Peak Railroad	613.31	1,484.69			8,226.49	9,654.10
Southern Pacific Company	10,123,494.80	10,151,846.19	446,373.06	448,632.48	5,151,039.19	6,260,179.07
Tonopah and Goldfield Railroad	58,691.66	67,823.03	8,688.14	8,681.45	40,021.18	28,837.48
Tonopah and Truckee Railroad	46,505.19	50,050.28	3,698.27	3,694.45	11,153.34	11,788.89
Virginia and Truckee Railway	66,335.07	53,009.96	3,960.00	3,870.00	8,368.07	7,632.65
Western Pacific Railway	962,734.78	988,578.78	33,862.31	36,737.90	198,070.98	229,023.87
Totals	\$26,237,567.18	\$28,075,429.92	\$1,056,660.35	\$1,067,066.02	\$12,908,702.79	\$14,525,660.94

**OPERATING EXPENSES
MAINTENANCE OF EQUIPMENT**

Company	Care—Repairs		Floating equipment—Repairs		Work equipment—Repairs	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$4,202,488.57	\$4,896,863.44			\$129,548.76	\$160,062.13
Bullfrog-Goldfield Railway	2,411.13	3,847.25	\$41,717.71	\$61,116.74	32.40	51.72
Central Pacific Railway						
Eagle Salt Works Railroad						10.60
Eureka-Nevada Railway	2,227.64	2,635.62				
Goldfield Consolidated M. & T. Co.	4,227.34	748.46				
Las Vegas and Tonopah Railroad	16,066.04	4,849.01			1,146.92	1,867.29
Nevada-California-Oregon Railway	2,663.96	13,014.31				7.71
Nevada Central Railroad	1,186.11	2,679.68			17.94	1,108.44
Nevada Copper Belt Railroad	43,898.34	2,132.06			24,928.97	22,163.26
Nevada Northern Railway	472,913.50	44,860.99				
San Pedro, Los Angeles and Salt Lake Railroad		419,713.91				
Silver Peak Railroad		32.56				
Southern Pacific Company	4,294,696.84	4,622,673.96	137,076.06	234,161.86	178,799.01	215,618.57
Tonopah and Goldfield Railroad	16,624.36	20,303.53			187.06	3.82
Tonopah and Tidewater Railroad	2,674.56	4,000.24			636.82	639.32
Virginia and Truckee Railway	9,186.24	7,983.45				
Western Pacific Railway	141,462.04	144,636.19	9,402.73	8,247.31	27,704.79	18,016.62
Totals	\$9,201,496.66	\$9,960,944.63	\$188,196.52	\$333,524.91	\$363,067.67	\$419,063.38

OPERATING EXPENSES MAINTENANCE OF EQUIPMENT

Company	Other maintenance of equipment expenses		Maintenance of joint equipment at terminals— Debit		Maintenance of joint equipment at terminals— Credit	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$375,381.79	\$449,569.93	\$16,020.92	\$13,217.53	\$28,589.86	\$22,073.80
Bullfrog-Goldfield Railroad	78.80	58.47				
Central Pacific Railway						
Eagle Salt Works Railway		1.20				
Eureka-Nevada Railway		898.38				
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	2,657.37	721.12				
Nevada-California-Oregon Railway	2,329.06	1,272.48				
Nevada-Central Railroad	1,945.95	833.87				
Nevada Copper Belt Railroad	955.40	2,013.80	57.86	31.20		
Nevada Northern Railway	21,051.60	22,234.10				
San Pedro, Los Angeles and Salt Lake Railroad	71,369.41	54,989.05	12,622.52	13,728.93		
Silver Peak Railroad						
Southern Pacific Company	350,898.35	433,632.35	17,345.03	13,163.83	17,297.66	\$,024.73
Tonopah and Goldfield Railroad	2,875.28	2,059.47	670.82			
Tonopah and Tidewater Railroad	1,511.53	1,625.87				
Virginia and Truckee Railroad	2,433.86	2,412.77				
Western Pacific Railway	10,217.09	6,978.44				
Totals	\$843,696.53	\$979,861.30	\$46,717.15	\$40,139.54	\$55,887.52	\$24,068.53

Italic figures denote credit.

OPERATING EXPENSES
MAINTENANCE OF EQUIPMENT, TRAFFIC EXPENSES AND TRANSPORTATION EXPENSES

Company	Total maintenance of equipment expenses		Traffic expenses—Total		Superintendence and dispatching of trains	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$13,631,674.62	\$16,317,940.38	\$2,006,716.41	\$2,074,834.62	\$1,311,544.04	\$1,338,006.78
Bullfrog-Goldfield Railroad	20,986.32	14,336.28	10,814.78	10,753.79	2,935.62	2,241.62
Central Pacific Railway						42.62
Eagle Salt Works Railroad		185.06		161.05		1,825.00
Eureka-Nevada Railway	3,620.27	6,157.72			300.00	
Goldfield Consolidated M. & T. Co.	35,088.06	2,335.09				4,262.03
Las Vegas and Tonopah Railroad	45,708.47	30,249.86	11,946.25	13,296.09	4,239.64	4,060.83
Nevada-California-Oregon Railway	10,762.03	45,823.61	7,629.78	9,206.29	2,865.70	150.50
Nevada Central Railroad	9,360.61	9,209.89			161.00	3,017.06
Nevada Copper Belt Railroad	179,662.03	21,615.05	2,786.76	3,710.99	2,740.28	10,683.03
Nevada Northern Railway	199,662.03	186,239.54	4,678.83	4,963.63	9,863.69	81,704.56
San Pedro, Los Angeles and Salt Lake Railroad	2,025,951.72	1,709,896.08	\$77,019.49	\$78,069.04	87,046.34	
Silver Peak Railroad	3,226.49	1,266.95	80.10	108.42		
Southern Pacific Company	11,201,493.60	13,163,060.31	2,180,606.33	2,062,542.61	1,128,782.23	1,164,383.15
Tonopah and Goldfield Railroad	113,466.94	89,697.57	21,623.15	22,639.70	23,243.07	21,891.88
Tonopah and Tidewater Railroad	30,784.61	32,664.12	25,769.31	20,549.31	6,874.67	6,000.41
Virginia and Truckee Railway	40,264.89	33,300.31	8,532.45	8,529.22	3,540.00	3,480.00
Western Pacific Railway	489,143.41	517,949.69	340,462.32	369,523.06	91,506.03	92,486.82
Totals	\$27,846,306.06	\$32,192,302.40	\$4,997,660.96	\$4,968,336.92	\$2,674,631.21	\$2,722,606.08

OPERATING EXPENSES TRANSPORTATION EXPENSES

Company	Station service		Yard enginemen		Other yard employees	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$4,304,191.78	\$4,708,229.29	\$912,376.78	\$668,124.65	\$1,384,213.77	\$1,479,278.79
Bullfrog-Goldfield Railroad	10,108.21	9,350.12			170.67	
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway		3,848.62				
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	10,899.61	10,978.96	1,204.11	1,296.00	1,156.14	1,313.83
Nevada-California-Oregon Railway	17,031.16	20,681.60				
Nevada Central Railroad	4,453.66	3,917.73				
Nevada Copper Belt Railroad	6,454.99	7,769.16			3.57	
Nevada Northern Railroad	80,024.38	31,194.06	1,204.35	5,369.16	4,211.90	9,930.55
San Pedro, Los Angeles and Salt Lake Railroad	363,660.72	369,046.15	49,043.56	48,061.43	107,001.74	101,565.50
Silver Peak Railroad	2,079.69	1,910.22				
Southern Pacific Company	4,129,033.15	4,286,460.44	522,422.97	551,048.22	1,622,766.67	1,531,493.06
Tonopah and Goldfield Railroad	32,968.71	32,870.72				
Tonopah and Tidewater Railroad	14,860.73	13,331.96				
Virginia and Truckee Railroad	21,711.96	21,186.47				
Western Pacific Railroad	289,713.90	314,537.24	31,350.90	32,712.02	63,243.63	67,406.28
Totals	\$9,236,734.45	\$9,822,311.63	\$1,217,601.67	\$1,301,621.47	\$3,062,772.09	\$3,190,968.00

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Fuel for yard locomotives		All other yard expenses		Road engines and motormen	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$621,927.53	\$673,788.42	\$318,759.54	\$450,512.25	\$3,547,023.72	\$3,610,394.77
Bullfrog-Goldfield Railroad					5,547.99	5,682.75
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.	1,586.57	1,607.61	366.99	549.89		
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway	2,110.10	3,230.00	698.96	829.56		
San Pedro, Los Angeles and Salt Lake Railroad	78,827.31	75,542.53	45,818.46	50,046.30		
Silver Peak Railroad						
Southern Pacific Company	522,373.51	501,991.40	392,458.26	369,032.10		
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railway						
Western Pacific Railway	28,808.36	30,504.00	8,442.33	9,484.39		
Totals	\$1,255,632.38	\$1,286,658.96	\$766,544.44	\$890,453.49	\$7,780,032.18	\$8,013,162.70

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Fuel for road locomotives		Other road locomotive supplies and expenses		Road trainmen	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$5,699,065.12	\$5,825,755.71	\$2,198,065.39	\$2,238,866.51	\$3,530,760.38	\$3,641,249.56
Bullfrog-Goldfield Railroad	8,104.34	7,847.53	4,171.74	3,920.00	4,964.45	5,101.37
Central Pacific Railway		251.50		141.57		115.20
Eagle Salt Works Railroad		3,160.96		1,341.02		834.10
Eureka-Nevada Railway	6,529.81	5,984.58	1,185.09	1,100.70	5,623.32	7,469.44
Goldfield Consolidated M. & T. Co.	27,900.88	25,886.50	7,427.25	8,098.15	9,949.50	10,278.54
Las Vegas and Tonopah Railroad	36,053.36	46,369.14	6,408.84	7,409.39	8,451.92	10,611.07
Nevada-California-Oregon Railroad	4,528.64	4,617.18	1,891.45	1,469.49	1,271.70	1,325.01
Nevada Central Railroad	13,671.29	19,776.56	3,530.60	6,007.84	6,041.88	10,496.35
Nevada Copper Belt Railroad	137,186.20	165,230.03	24,158.29	23,966.56	62,238.26	64,124.96
Nevada Northern Railway	962,973.93	913,799.44	240,219.16	204,838.42	411,503.74	410,881.29
San Pedro, Los Angeles and Salt Lake Railroad	2,329.56	1,642.80	1,047.66	669.24	1,109.60	1,066.20
Silver Peak Railroad	5,475,866.85	5,124,837.16	1,756,868.04	1,751,172.32	3,739,844.77	4,001,749.99
Southern Pacific Company	67,649.74	47,565.83	16,311.90	13,259.66	18,434.25	18,310.21
Tonopah and Goldfield Railroad	20,617.53	19,643.31	11,100.91	11,245.19	11,331.00	11,180.00
Tonopah and Tulewater Railroad	28,388.90	29,467.16	6,491.27	9,664.23	13,824.00	14,044.97
Virginia and Truckee Railroad	643,756.94	678,826.91	157,047.09	169,540.09	274,651.71	296,468.69
Western Pacific Railway						
Totals	\$13,124,622.44	\$12,920,707.29	\$4,432,924.58	\$4,447,700.97	\$8,090,065.45	\$8,494,238.94

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Train supplies and expenses		Injuries to persons		Loss and damage	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$1,127,782.55	\$1,276,518.73	\$407,080.90	\$534,825.81	\$702,423.17	\$656,245.98
Bullfrog-Goldfield Railroad	1,048.73	1,490.63			56.81	70.57
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway	93.47	229.08		95.00		18.19
Goldfield Consolidated M. & T. Co.	1,689.93	44.64		82.50		
Las Vegas and Tonopah Railroad	1,726.94	1,830.85		125.00	178.35	731.79
Nevada-California-Oregon Railway	51.68	2,044.47	98.45		664.99	3,075.71
Nevada Central Railroad	240.61	63.08			317.28	160.21
Nevada Copper Belt Railroad	7,063.52	467.15	43.25	228.70	208.99	229.43
Nevada Northern Railway	146,731.92	5,163.16	65.50	1,147.00	1,094.53	432.73
San Pedro, Los Angeles and Salt Lake Railroad	448.72	122,062.75	20,653.67	28,280.03	47,309.50	65,963.32
Silver Peak Railroad	1,034,723.63	1,134,754.14	385,413.03	270,415.79	104.82	
Southern Pacific Company	3,244.44	2,984.42	2,604.45	484.64	568,894.56	510,604.35
Tonopah and Goldfield Railroad	3,246.38	3,741.73	3.58	10.00	1,257.36	821.16
Tonopah and Tidewater Railroad	5,407.04	2,506.85	3,376.00	5,014.00	1,147.72	178.14
Virginia and Truckee Railway	55,683.19	60,340.35	9,667.84	25,838.94	283.02	227.81
Western Pacific Railway					33,407.97	71,745.45
Totals	\$2,389,122.75	\$2,614,240.17	\$828,956.67	\$866,507.41	\$1,355,980.09	\$1,310,494.84

Italic figures denote credit.

OPERATING EXPENSES TRANSPORTATION EXPENSES

Company	Other casualties		Other transportation expenses		Operating joint yards and terminals—Debit	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$196,979.64	\$207,680.66	\$327,267.23	\$397,966.01	\$244,838.43	\$277,150.23
Bullfrog-Goldfield Railroad	77.37	10.00	529.26	500.67		102.90
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company						
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railroad						
Western Pacific Railway						
Totals	\$386,145.63	\$436,117.08	\$2,563,253.17	\$2,862,896.99	\$778,990.99	\$861,274.43

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Operating joint yards and terminals—Credit		Operating joint tracks— Debit		Operating joint tracks— Credit	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	<i>\$156,208.00</i>	<i>\$180,005.80</i>	<i>\$82,365.21</i>	<i>\$79,068.14</i>	<i>\$172,768.02</i>	<i>\$183,332.51</i>
Bullfrog-Goldfield Railroad					<i>89.97</i>	<i>99.33</i>
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway						
Nevada Central Railroad						
Nevada Copper Belt Railroad					<i>42.56</i>	
Nevada Northern Railway						
San Pedro, Los Angeles and Salt Lake Railroad	<i>\$,284.03</i>	<i>\$,899.10</i>	<i>72,411.42</i>	<i>82,612.22</i>	<i>\$,074.17</i>	<i>\$,337.58</i>
Silver Peak Railroad						
Southern Pacific Company	<i>\$32,497.73</i>	<i>106,333.64</i>	<i>23,826.37</i>	<i>15,946.15</i>	<i>75,279.08</i>	<i>103,095.69</i>
Tonopah and Goldfield Railroad	<i>167.58</i>	<i>108.74</i>	<i>395.83</i>	<i>247.20</i>		
Tonopah and Tidewater Railroad			<i>89.97</i>	<i>96.83</i>		
Virginia and Truckee Railway						
Western Pacific Railway	<i>\$,550.61</i>	<i>\$,755.54</i>	<i>7,371.88</i>	<i>9,054.48</i>	<i>1,525.68</i>	<i>1,546.71</i>
Totals	<i>\$393,707.95</i>	<i>\$292,097.02</i>	<i>\$186,460.63</i>	<i>\$187,026.52</i>	<i>\$252,800.08</i>	<i>\$291,910.76</i>

Italic figures denote credit.

OPERATING EXPENSES
TRANSPORTATION EXPENSES AND GENERAL EXPENSES

Company	Total transportation expenses		Administration		Insurance	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$28,764,617.51	\$28,193,318.06	\$1,351,253.68	\$1,399,990.28	\$286,497.52	\$242,067.44
Bullfrog-Goldfield Railway	37,619.22	36,219.73	4,592.10	5,745.30	868.80	779.00
Central Pacific Railway		827.06		1,776.72		
Eagle Salt Works Railroad		14,240.25		8,221.69		36.00
Eureka-Nevada Railway	17,964.10	18,100.67		1,200.00		
Goldfield Consolidated M. & T. Co.	78,486.99	80,888.87	210.00	17,134.46	515.73	498.59
Las Vegas and Tonopah Railroad	96,705.19	113,685.39	16,190.84	23,846.69	680.03	1,168.85
Nevada-California-Oregon Railway	16,732.41	17,684.62	21,444.42	6,333.20	19.92	17.86
Nevada Central Railroad	42,564.52	61,250.34	5,875.66	7,538.76	423.33	2,066.64
Nevada Copper Belt Railroad	318,107.65	365,041.64	11,100.20	37,891.94	2,466.19	5,174.86
Nevada Northern Railway	3,372,223.07	3,523,068.51	37,354.54	166,242.35	23,891.69	29,236.59
San Pedro, Los Angeles and Salt Lake Railroad	3,316.30	7,964.23	161,174.22	1,272.90		
Silver Peak Railroad	26,170,200.09	26,697,434.74	1,372.90	1,980,024.31	246,431.43	259,137.52
Southern Pacific Company	196,564.06	160,000.69	1,660,438.81	26,366.61	5,106.46	2,406.84
Tonopah and Goldfield Railroad	79,827.71	76,890.66	27,623.74	8,666.94	1,966.23	1,688.91
Tonopah and Tidewater Railroad	96,080.92	100,671.93	8,873.25	11,316.67	323.00	323.00
Virginia and Truckee Railroad			10,666.50			
Western Pacific Railway	2,165,242.10	2,347,789.33	242,677.92	272,841.94	20,715.60	22,891.63
Totals	\$59,453,851.83	\$61,615,056.59	\$3,560,769.78	\$3,855,572.46	\$575,051.95	\$567,508.61

OPERATING EXPENSES
GENERAL EXPENSES

Company	Other general expenses		General administration of joint tracks and terminals—Debit				General administration of joint tracks and terminals—Credit	
	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$236,543.63	\$361,090.73	\$5,734.61	\$4,636.25	\$2,046.35	\$2,553.96		
Bullfrog-Goldfield Railroad	720.76	606.77			57.18	33.87		
Central Pacific Railway								
Eagle Salt Works Railroad		2.58						
Eureka-Nevada Railway		519.07						
Goldfield Consolidated M. & T. Co.	1,941.02	1,888.12						
Las Vegas and Tonopah Railroad	418.56	477.01		3.00				
Nevada-California-Oregon Railway	1,162.26	1,002.14						
Nevada Central Railroad		362.35						
Nevada Copper Belt Railroad	1,606.53	1,002.72						
Nevada Northern Railway	2,546.46	3,132.44						
San Pedro, Los Angeles and Salt Lake Railroad	23,324.96	29,909.03	3,266.39	3,190.76		36.00		
Silver Peak Railroad								
Southern Pacific Company	431,124.70	472,797.46	4,800.70	4,960.70		350.04		
Tonopah and Goldfield Railroad	2,673.16	3,170.75						
Tonopah and Tidewater Railroad	572.93	945.48	40.28	32.87				
Virginia and Truckee Railway	726.61	866.86						
Western Pacific Railway	18,856.17	19,307.69	62.27	53.04				
Totals	\$781,369.74	\$997,070.20	\$13,903.25	\$12,866.62	\$2,083.53	\$22,742.87		

Italic figures denote credit.

OPERATING EXPENSES, GENERAL EXPENSES, AND RECAPITULATION

Company	Total general expenses		Maintenance of way and structures		Maintenance of equipment	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$1,966,888.38	\$2,006,891.34	\$13,347,319.29	\$15,239,196.31	\$13,631,674.62	\$16,317,940.38
Burlingame-Goldfield Railroad	6,144.48	7,096.20	23,808.04	24,878.83	20,996.32	14,836.28
Central Pacific Railroad						
Eagle Salt Works Railroad		1,779.30		759.33		186.06
Eureka-Nevada Railway	2,161.02	8,776.66		16,081.07		6,157.72
Goldfield Consolidated M. & T. Co.	17,115.12	3,068.12	6,182.98	5,297.31	3,630.27	2,336.53
Las Vegas and Tonopah Railroad	23,436.71	18,113.06	41,827.46	48,968.57	36,068.06	30,249.86
Nevada-California-Oregon Railroad	6,470.35	26,007.63	98,264.99	88,904.63	45,708.47	46,628.51
Nevada Central Railroad	13,130.06	6,713.40	13,218.97	13,841.14	10,762.08	9,209.89
Nevada Copper Belt Railroad	42,369.19	10,606.12	12,038.86	12,910.57	9,630.61	21,615.55
Nevada Northern Railway	216,656.26	46,199.23	166,866.87	186,439.71	179,652.03	186,239.54
San Pedro, Los Angeles and Salt Lake Railroad	1,372.90	228,541.73	1,253,689.26	1,170,865.69	2,025,961.72	1,709,936.08
Silver Peak Railroad	2,342,796.64	1,272.90	1,613.81	1,486.62	3,226.49	2,696.96
Southern Pacific Company	35,309.88	2,694,619.96	10,123,494.90	10,161,846.19	11,201,493.60	13,168,060.31
Tonopah and Goldfield Railroad	11,742.69	30,984.10	88,691.66	67,823.08	118,485.94	89,897.57
Tonopah and Tidewater Railroad	11,642.11	11,537.20	49,506.19	50,060.28	30,794.61	32,664.12
Virginia and Truckee Railway	282,291.96	13,500.53	60,835.07	88,009.96	40,246.89	33,300.31
Western Pacific Railway		315,094.20	962,734.78	988,578.78	489,143.41	617,849.69
Totals	\$4,929,615.96	\$5,380,275.62	\$26,237,667.18	\$28,076,639.92	\$27,846,896.06	\$32,192,302.40

OPERATING EXPENSES—RECAPITULATION

Company	Traffic expenses		Transportation expenses		General expenses	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$2,005,716.41	\$2,074,834.62	\$28,764,617.51	\$28,193,318.08	\$1,916,988.09	\$2,005,391.34
Bullfrog-Goldfield Railroad	10,814.78	10,753.79	37,619.22	36,219.73	6,144.48	7,096.20
Central Pacific Railroad						
Eagle Salt Works Railroad	11,946.25	13,236.09	17,964.10	14,240.25		1,779.30
Eureka-Nevada Railway	7,629.78	9,206.29	78,436.99	18,100.67	2,151.02	8,776.66
Goldfield Consolidated M. & T. Co.			86,705.19	80,888.87	17,115.12	3,086.12
Las Vegas and Tonopah Railroad			16,752.41	113,685.39	23,436.71	26,007.68
Nevada-California-Oregon Railway			42,554.52	17,654.62	6,470.35	6,713.40
Nevada Central Railroad	2,785.76	3,710.99	318,107.55	61,280.34	13,130.06	10,608.12
Nevada Copper Belt Railroad	4,676.83	4,583.63	3,372,223.07	3,823,068.51	216,656.28	46,196.23
Nevada Northern Railway	377,019.49	378,099.04	9,316.30	7,964.28	1,372.90	228,541.73
San Pedro, Los Angeles and Salt Lake Railroad	80.10	106.42	28,170,200.09	26,697,434.74	2,342,795.64	1,272.90
Silver Peak Railroad	2,180,608.33	2,062,542.61	196,554.06	180,000.59	35,309.38	2,596,619.95
Southern Pacific Company	21,629.16	22,629.70	79,527.71	76,890.56	11,742.69	30,934.10
Tonopah and Goldfield Railroad	26,769.31	20,549.31	98,090.92	100,671.93	11,642.11	11,637.20
Tonopah and Tidewater Railroad	8,532.45	8,329.32	2,156,242.10	2,347,789.33	282,291.96	12,500.53
Virginia and Truckee Railway	340,452.32	359,523.06				315,094.20
Western Pacific Railway						
Totals	\$4,997,660.96	\$4,968,336.92	\$59,453,351.83	\$61,615,066.59	\$4,929,615.96	\$5,380,275.62

OPERATING EXPENSES—RECAPITULATION

Company	Total operating expenses		Ratio of operating expenses to earnings—Per cent		Maintenance of way and structures—Per cent of total expenses	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$57,666,316.02	\$63,830,682.78	64.18	65.07	23.15	23.87
Bullfrog-Goldfield Railroad	99,367.84	92,785.83	99.20	93.69	23.95	26.27
Central Pacific Railroad						
Eagle Salt Works Railroad		3,550.75		589.51		21.38
Eureka-Nevada Railroad		45,415.75		81.25		35.41
Goldfield Consolidated M. & T. Co.		28,821.68		33.00		15.38
Las Vegas and Tonopah Railroad	194,353.87	191,504.45	94.76	97.35	22.69	25.67
Nevada-California-Oregon Railroad	261,745.14	253,632.40	67.71	70.21	37.54	31.35
Nevada Central Railroad	47,198.76	47,419.05	78.93	86.00	28.01	23.19
Nevada Copper Belt Railroad	80,139.81	110,105.57	61.11	48.75	15.02	11.72
Nevada Northern Railroad	710,662.57	797,533.75	47.07	48.49	23.34	23.88
San Pedro, Los Angeles and Salt Lake Railroad	7,245,639.80	6,810,510.95	79.41	66.52	17.30	17.19
Silver Peak Railroad	15,609.60	13,517.17	105.09	105.47	10.34	11.00
Southern Pacific Company	52,018,582.56	54,671,483.90	57.40	57.35	19.46	18.67
Tonopah and Goldfield Railroad	460,670.18	371,084.99	60.58	53.29	19.25	18.28
Tonopah and Tidewater Railroad	197,329.51	191,691.47	67.72	58.40	25.09	26.11
Virginia and Truckee Railroad	218,787.44	212,812.05	70.58	70.98	27.58	27.26
Western Pacific Railroad	4,229,864.55	4,478,835.06	80.44	72.55	22.52	20.96
Totals	\$123,465,090.97	\$132,181,400.45				

OPERATING EXPENSES—RECAPITULATION

Company	Maintenance of equip- ment—Percentage of total expenses		Traffic expenses— Percentage of total expenses		Transportation expenses—Percentage of total expenses		General expenses— Percentage of total expenses	
	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	23.64	25.56	3.48	3.25	46.41	44.17	3.82	3.15
Bullfrog-Goldfield Railroad	21.12	15.45	10.88	11.59	37.86	39.04	6.19	7.65
Central Pacific Railroad								
Eagle Salt Works Railroad		5.21				23.29		50.12
Eureka-Nevada Railway	12.52	13.56		.35		31.35		19.33
Goldfield Consolidated M. & T. Co.	19.00	15.80	6.43	6.94	62.12	62.80	7.44	10.72
Las Vegas and Tonopah Railroad	17.46	16.16	2.92	3.26	42.54	42.23	9.29	9.46
Nevada-California-Oregon Railway	22.78	19.42			33.13	40.08	8.96	9.16
Nevada Central Railroad	15.02	19.63			35.60	37.23	13.71	14.16
Nevada Copper Belt Railroad	25.28	24.48	3.43	3.37	53.10	55.65	16.38	9.63
Nevada Northern Railway	27.96	25.11	.66	.58	44.76	45.77	5.96	6.79
San Pedro, Los Angeles and Salt Lake Railroad	20.67	19.88	5.20	5.55	46.56	48.79	2.99	3.86
Silver Peak Railroad	21.53	25.11	.50	.79	59.69	58.92	8.80	9.41
Southern Pacific Company	25.72	24.06	4.19	3.77	50.31	43.83	4.51	4.76
Tonopah and Goldfield Railroad	15.60	17.04	13.06	10.72	42.67	43.12	7.66	8.33
Tonopah and Tidewater Railroad	13.40	15.65	3.90	3.91	40.80	40.11	5.96	6.02
Virginia and Truckee Railway	11.56	11.56	3.06	3.03	44.80	47.31	6.32	5.87
Western Pacific Railway					51.19	52.42	6.63	7.03

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total property investment		Total securities		Total other investments	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	\$468,298,633.23	\$617,251,407.47			\$23,571,304.06	\$23,469,629.42
Bullfrog-Goldfield Railroad.....	3,773,567.95	3,763,573.81				
Central Pacific Railway.....	261,979,623.35	269,962,177.00	\$339,259.53	\$533,531.36	154,686.58	154,686.58
Eagle-San Works Railroad.....	31,866.27	30,754.19	200,000.00	200,000.00		
Eureka-Nevada Railway.....		11,712.18				
Goldfield Consolidated M. & T. Co.....	15,076.00	10,432.30			596,132.10	471,027.44
Las Vegas and Tonopah Railroad.....	3,053,526.98	3,060,563.78				
Nevada-California-Oregon Railroad.....	3,650,154.86	3,920,863.29				
Nevada Central Railroad.....	1,048,692.19	1,094,687.97				
Nevada Copper Belt Railroad.....	1,048,690.19	2,644,324.81	500,000.00	500,000.00		
Nevada Northern Railway.....	2,738,094.85	2,677,724.86				
San Pedro, Los Angeles and Salt Lake Railroad.....	70,157,194.81	74,579,163.71			487,966.06	533,555.94
Silver Pacific Railroad.....	208,236.71	209,163.71				
Southern Pacific Company.....	31,539,733.31	31,541,971.66	209,962,245.31	209,962,245.31	227,840,265.93	255,477,431.97
Tonopah and Goldfield Railroad.....	3,699,238.46	3,667,044.96			11,968.24	11,621.44
Tonopah and Tidewater Railroad.....	4,175,897.48	4,157,336.08	350,000.00	350,000.00		
Virginia and Truckee Railroad.....	4,416,815.89	4,419,129.66				
Western Pacific Railway.....	161,347,862.40	155,586,826.09	99,900.00	99,900.00	175,439.78	175,439.78
Totals.....	\$1,151,083,391.63	\$1,177,536,422.55	\$210,499,607.36	\$211,685,726.67	\$252,837,794.65	\$280,236,382.57

*Figures shown taken from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total working assets		Accrued income not due		Total deferred debit items	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$64,378,550.09	\$52,300,875.71			\$6,589,814.25	\$6,294,905.81
Burlingame-Goldfield Railroad	57,272.39	60,192.85			1,269.86	597.53
Central Pacific Railroad	39,771,320.26	30,007,114.39	\$866.66	\$867.94	6,997,800.16	7,192,556.77
Eagle-Salt Works Railroad	4,530.69	4,632.95				
Eureka-Nevada Railway ^a	12,441.11	9,906.74				
Goldfield Consolidated M. & T. Co.	630,804.32	797,764.90				
Las Vegas and Tonopah Railroad	43,343.89	40,333.35				
Nevada-California-Oregon Railroad	727,514.28	590,437.86			9,693.00	3,725.83
Nevada Central Railroad	27,719.16	32,946.51			1,406.99	3,807.82
Nevada Copper Belt Railroad	49,830.99	39,476.09			272.91	646.96
Nevada Northern Railway	733,199.86	483,418.46			665,830.05	665,000.00
San Pedro, Los Angeles and Salt Lake Railroad	2,262,039.04	3,156,816.56	1,426.66	1,426.66	5,518,397.35	1,793,540.25
Silver Peak Railroad	146,448,673.53	130,251,673.81				
Southern Pacific Company	764,441.36	785,422.04	2,024,458.90	2,118,744.06	12,195,810.33	25,261,571.96
Tonopah and Goldfield Railroad	240,479.19	244,956.85			56,833.34	56,833.34
Tonopah and Tidewater Railroad	205,312.66	190,194.51			341,597.68	400,140.61
Virginia and Truckee Railroad	718,835.47	1,420,401.41			962,082.80	7,524,731.66
Western Pacific Railroad						
Totals	\$257,066,307.79	\$220,415,563.30	\$2,026,762.22	\$2,121,088.68	\$33,342,792.87	\$49,198,117.54

^aFigures taken from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Profit and loss—Balance		Grand total	
	1912	1913	1912	1913
Archison, Topeka and Santa Fe Railway			\$692,838,353.63	\$699,316,813.41
Bullfrog-Goldfield Railroad		\$435,817.64	4,204,451.71	4,266,064.77
Central Pacific Railway			306,642,689.88	307,990,865.10
Eagle Salt Works Railroad	10,566.36	16,110.04	246,553.22	251,076.59
Eureka-Nevada Railway ^a		945.48	12,441.11	22,563.40
Goldfield Consolidated M. & T. Co.			1,242,012.92	1,279,144.54
Las Vegas and Tonopah Railroad	33,770.02	73,614.60	3,170,104.99	3,198,237.56
Nevada-California-Oregon Railway			4,579,076.26	4,516,134.97
Nevada Central Railroad			1,624,874.07	1,628,065.47
Nevada Copper Belt Railroad			1,891,065.41	1,969,551.54
Nevada Northern Railway	128,234.21	80,408.18	3,491,284.71	3,624,755.31
San Pedro, Los Angeles and Salt Lake Railroad	4,034,748.69	3,680,799.48	82,451,771.61	83,842,773.15
Silver Peak Railroad		686.58	205,537.61	209,866.29
Southern Pacific Company			629,379,389.73	654,603,628.79
Tonopah and Goldfield Railroad			4,527,480.65	4,510,921.74
Tonopah and Tidewater Railroad	276,729.30	302,195.76	6,381,193.65	6,454,628.29
Virginia and Truckee Railroad	378,071.46	380,615.80	6,000,000.00	6,000,000.00
Western Pacific Railway	3,281,972.87	6,662,722.13	166,666,663.32	171,470,021.07
Totals	\$8,513,697.95	\$11,643,825.68	\$1,915,373,344.37	\$1,952,894,076.99

^aFigures taken from report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Total stock		Total mortgage, bonded and secured debt		Working liabilities	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$284,373,530.00	\$305,080,530.00	\$345,933,045.00	\$322,439,045.00	\$9,813,343.02	\$13,321,705.68
Bullfrog-Goldfield Railroad	2,000,000.00	2,000,000.00	1,856,000.00	1,839,045.00	348,088.21	425,729.06
Central Pacific Railway	84,675,500.00	84,675,500.00	200,863,897.79	200,018,397.79	1,041,800.51	907,912.42
Eagle Salt Works Railway	200,000.00	200,000.00			46,553.22	51,076.59
Eureka-Nevada Railway*	2,500.00	2,500.00			6,254.35	17,743.40
Goldfield Consolidated M. & T. Co.	400,000.00	400,000.00			61,705.57	33,293.15
Las Vegas and Tonopah Railroad	1,500,000.00	1,500,000.00			1,642,766.10	1,671,302.85
Nevada-California-Oregon Railway	2,200,000.00	2,200,000.00	1,415,000.00	1,401,000.00	214,628.32	153,075.42
Nevada Central Railway	750,000.00	750,000.00	750,000.00	750,000.00	1,733.75	1,922.61
Nevada Copper Belt Railroad	1,000,000.00	1,000,000.00	622,000.00	622,000.00	257,866.67	237,854.17
Nevada Northern Railway	2,000,000.00	2,000,000.00	1,000,000.00	1,000,000.00	141,589.53	190,869.12
San Pedro, Los Angeles and Salt Lake Railroad	25,000,000.00	25,000,000.00	55,156,000.00	55,156,000.00	2,146,899.81	8,438,857.39
Silver Peak Railroad	200,000.00	200,000.00				
Southern Pacific Company	272,875,730.64	272,825,195.64	140,587,410.00	165,581,910.00	128,275,667.30	115,439,608.20
Tonopah and Goldfield Railroad	2,150,000.00	2,150,000.00	1,038,000.00	950,000.00	98,688.96	77,238.44
Tonopah and Tidewater Railroad	1,000,000.00	1,000,000.00	3,295,344.10	3,295,344.10	1,057,211.11	1,130,897.47
Virginia and Truckee Railway	5,000,000.00	5,000,000.00				
Western Pacific Railway	75,000,000.00	75,000,000.00	75,000,000.00	75,081,250.00	15,532,406.59	19,560,860.22
Totals	\$760,127,280.64	\$780,983,725.64	\$827,505,696.89	\$828,122,946.89	\$160,686,703.02	\$156,680,757.19

*Figures shown from the report of the Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Accrued liabilities not due		Deferred credit items		Appropriated surplus	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$8,594,507.87	\$8,547,645.04	\$245,618.42	\$465,164.72	\$23,408,183.33	\$23,882,926.16
Bullfrog-Goldfield Railway			363.50	325.71		
Central Pacific Railway		202,786.99	228,600.27	43,794.54		
Eagle Salt Works Railway						
Eureka-Nevada Railway			882.21	2,320.00		
Goldfield Consolidated M. & T. Co.	2,515.32	2,500.20				
Las Vegas and Tonopah Railroad	9,565.92	8,491.86	17,772.97	18,442.85		
Nevada-California-Oregon Railway	8,325.87	10,475.72	8,355.67	9,938.11	459,511.47	481,576.76
Nevada Central Railroad			1,482.82	704.26		
Nevada Copper Belt Railroad						
Nevada Northern Railway	11,196.74	9,697.37				
San Pedro, Los Angeles and Salt Lake Railroad	34,338.94	36,306.37				
Silver Peak Railroad	18,189.94	92,657.55	132,181.86	156,258.21		
Southern Pacific Company						
Tonopah and Goldfield Railroad	9,264,257.18	9,510,319.01	10,128,282.34	13,689,750.19	1,608,332.95	1,608,142.40
Tonopah and Tidewater Railroad	19,801.71	18,794.99	6,215.38	2,877.05	431,982.50	516,588.50
Virginia and Truckee Railroad	38,292.44	38,293.72	346.00	304.00		
Western Pacific Railway						
Totals	993,822.04	1,755,310.11	59,354.69	52,580.74		
	\$18,984,815.87	\$20,233,278.93	\$10,829,406.13	\$14,441,925.38	\$25,908,000.25	\$31,499,233.82

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Profit and loss—Balance			Grand total	
	1912	1913		1912	1913
Atchison, Topeka and Santa Fe Railway	\$20,470,115.99	\$20,569,800.81		\$692,838,353.63	\$699,316,818.41
Bullfrog-Goldfield Railroad				4,204,451.71	4,266,064.77
Central Pacific Railway	21,832,891.31	22,082,463.36		308,642,689.88	307,930,855.10
Eagle Salt Works Railroad				246,563.22	251,076.59
Eureka-Nevada Railway ^a	2,854.55			12,441.11	22,563.40
Goldfield Consolidated M. & T. Co.	777,792.03	843,351.19		1,242,012.92	1,279,144.54
Las Vegas and Tonopah Railroad				3,170,104.99	3,196,237.56
Nevada-California-Oregon Railway	273,254.92	259,103.96		4,579,076.25	4,515,134.97
Nevada Central Railroad	21,157.50	25,428.60		1,524,374.07	1,528,055.47
Nevada Copper Belt Railroad				1,891,065.41	1,869,551.54
Nevada Northern Railway	315,336.34	397,579.82		3,491,284.71	3,624,755.31
San Pedro, Los Angeles and Salt Lake Railroad				82,451,771.61	83,842,773.15
Silver Peak Railroad	5,537.61	9,855.29		205,537.61	209,855.29
Southern Pacific Company	66,839,709.32	75,948,703.35		629,379,339.73	654,603,628.73
Tonopah and Goldfield Railroad	782,812.00	796,922.76		4,527,490.55	4,510,921.74
Tonopah and Tidewater Railroad				5,381,193.65	5,454,629.29
Virginia and Truckee Railway				5,000,000.00	5,000,000.00
Western Pacific Railway				166,585,583.32	171,470,021.07
Totals	\$111,321,461.67	\$120,932,209.14		\$1,915,873,344.37	\$1,952,894,076.99

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.^bBalance sheet figures of this company incomplete. Figure shown does not represent balance profit and loss, but is simply a miscellaneous debit.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	General officers		Other officers		General office clerks		Station agents		Other station men		Enginemen	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$17.73	\$20.82	\$7.51	\$8.14	\$2.57	\$2.51	\$2.35	\$2.37	\$1.99	\$2.01	\$6.05	\$6.26
Bullfrog-Goldfield Railroad	11.18	11.62	6.59	7.16	3.01	3.54	4.26	4.28			9.10	9.12
Central Pacific Railway												
Eagle Salt Works Railroad												
Eureka-Nevada Railway		7.06		83								2.25
Goldfield Consolidated M. & T. Co.	6.52	7.82	1.15	4.41				2.68		1.60		5.01
Las Vegas and Tonopah Railroad	7.47	7.48	6.23	6.46	2.87	3.13	3.66	3.64	3.96	4.07	6.50	5.50
Nevada-California-Oregon Railway	7.72	8.93	5.54	5.75	3.02	2.96	2.38	2.35	1.92	1.98	5.28	5.77
Nevada Central Railroad	9.81	9.96			4.92	4.94	3.60	3.62	3.00		4.77	4.80
Nevada Copper Belt Railroad		5.75	4.07	4.75	2.86	2.56	3.25	3.94	2.75	2.37	4.25	4.78
Nevada Northern Railway	8.53	9.65	4.57	4.88	3.55	3.42	3.39	3.39	2.65	2.84	5.22	5.21
San Pedro, Los Angeles and Salt Lake Railroad	11.89	13.43	7.44	7.54	2.84	2.85	2.76	2.77	2.13	2.14	5.01	5.01
Silver Peak Railroad	1.64	1.64					3.11	2.88			5.92	5.69
Southern Pacific Company	17.93	22.69	8.63	8.23	2.66	2.73						
Tonopah and Goldfield Railroad	13.51	13.66	6.34	6.16	5.90	5.77	5.13	4.94	4.17	4.16	6.82	6.43
Tonopah and Tidewater Railroad	11.16	11.62	6.48	7.14	3.01	3.55	3.41	3.42			6.52	6.49
Virginia and Truckee Railway	10.56	10.96	4.10	4.11	3.82	3.89	2.96	2.96	2.13	2.09	5.00	5.00
Western Pacific Railway	24.79	26.90	7.88	8.07	3.28	3.29	2.71	2.74	2.45	2.44	6.03	6.02

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Firemen		Conductors		Other trainmen		Machinists		Carpenters		Other shopmen	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$3.78	\$3.83	\$5.86	\$5.94	\$3.54	\$3.50	\$4.05	\$4.09	\$2.97	\$3.01	\$2.54	\$2.54
Bullfrog-Goldfield Railway	6.83	6.84	5.94	5.89	3.71	3.71					4.92	4.95
Central Pacific Railway												
Eagle Salt Works Railway												
Eureka-Nevada Railway		3.01		3.60		2.42		3.18		3.70		3.21
Goldfield Consolidated M. & T. Co.	4.91	4.00		6.50	4.00	4.00					4.50	4.50
Las Vegas and Tonopah Railway	3.27	3.23	4.96	4.99	3.64	3.65			3.49	3.30	3.13	3.20
Nevada-California-Oregon Railway	3.00	3.35	3.40	3.68	2.68	2.83			3.23	3.26	2.90	3.11
Nevada Central Railroad	2.95	2.99	4.21	4.26	4.00	4.00	3.76	3.39	4.46	4.08	2.92	3.18
Nevada Copper Belt Railroad	3.62	3.45	3.80	4.42	2.21	3.80	4.27	4.31	4.34	4.00	3.17	3.19
Nevada Northern Railway	3.68	3.73	4.78	4.94	3.65	3.92	4.49	4.50	4.50	4.50	2.88	2.92
San Pedro, Los Angeles and Salt Lake Railroad	3.12	3.17	4.80	4.79	3.36	3.39	3.55	3.36	2.51	2.55	2.42	2.40
Silver Peak Railroad	4.49	4.39	2.93	3.26								
Southern Pacific Company												
Tonopah and Goldfield Railroad	4.55	4.24	5.55	5.53	3.97	3.75	4.78	4.97	5.06	4.82	4.11	4.17
Tonopah and Tidewater Railroad	4.28	4.29	6.08	6.01	3.78	3.78	3.45	3.86	4.01	4.00	3.38	3.32
Virginia and Truckee Railway	3.50	3.49	3.99	3.99	3.31	3.30	4.82	4.80	4.21	3.95	3.39	3.41
Western Pacific Railway	3.89	3.84	5.09	5.19	3.58	3.56	4.29	4.28	3.41	3.43	2.50	2.53

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Section fore- men		Other track- men		Switch tenders, watchmen, etc.		Telegraph operators and dispatchers		Employees' ac- count floating equipment		All others	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$2.19	\$2.18	\$1.32	\$1.49	\$1.46	\$1.51	\$3.07	\$3.11	\$3.09	\$3.11	\$2.22	\$2.27
Bullfrog-Goldfield Railroad	3.06	3.02	2.00	2.00	2.50	2.50	4.31	4.44			3.88	3.75
Central Pacific Railway												
Eagle Salt Works Railroad												
Eureka-Nevada Railway		2.59		2.16		2.12						2.46
Goldfield Consolidated M. & T. Co.	4.00	4.00	3.50	3.50								
Las Vegas and Tonopah Railroad	2.40	2.55	1.65	1.65		2.50					1.88	2.38
Nevada-California-Oregon Railway	2.17	2.19	1.93	1.78							2.66	2.58
Nevada Central Railroad	2.75	2.75	2.00	2.00		3.00	3.25	3.29			1.64	1.77
Nevada Copper Belt Railroad	3.09	2.28	2.28	1.83			3.20	4.09			1.82	
Nevada Northern Railway	2.37	2.45	1.66	1.83			3.85	4.05			3.04	3.08
San Pedro, Los Angeles and Salt Lake Railroad	2.31	2.33	1.27	1.29	2.36	1.92	3.20	3.18			2.27	2.40
Silver Peak Railroad												4.72
Southern Pacific Company	2.91	3.00	1.56	1.63			3.18	3.50				
Tonopah and Goldfield Railroad	3.37	3.38	2.07	2.06	3.49	3.45	4.16	4.26			2.97	3.28
Tonopah and Tidewater Railroad	3.28	3.00	1.75	1.75	2.31	2.32	4.36	4.67			3.57	3.46
Virginia and Truckee Railway	2.84	2.85	2.18	2.19	2.60	2.61	4.84	4.85			2.97	3.20
Western Pacific Railway	2.22	2.17	1.65	1.69	1.74	1.66	4.06	4.20	3.04	3.07	2.53	2.50

GENERAL STATISTICS

Company	Number of passengers carried earning revenue		Number of passengers carried one mile		Average distance carried	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	10,996,525	11,608,596	1,108,165,099	1,159,808,097	100.32	98.91
Burlingame-Goldfield Railroad	5,741	5,287	344,554	339,215	60.02	64.16
Central Pacific Railroad						
Central Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.		2,824		142,466		60.45
Las Vegas and Tonopah Railroad	5,904	6,067	711,015	673,917	120.43	110.71
Nevada-California-Oregon Railway	29,305	29,373	2,459,897	2,471,407	83.94	84.14
Nevada Central Railroad	2,629	2,295	216,595	185,065	82.38	80.63
Nevada Copper Belt Railroad	17,963	23,967	218,115	350,711	12.10	14.63
Nevada Northern Railway	231,332	332,969	5,014,134	6,411,059	17.82	19.25
San Pedro, Los Angeles and Salt Lake Railroad	1,604,962	1,541,250	138,968,720	134,103,010	86.60	87.01
Silver Peak Railroad	2,370	2,098	41,475	36,715	17.50	17.50
Southern Pacific Company	34,639,576	35,983,455	1,410,780,159	1,433,822,748	40.73	39.85
Tonopah and Goldfield Railroad	35,251	36,797	1,858,780	1,945,445	52.71	52.87
Tonopah and Tidewater Railroad	7,344	7,338	862,529	834,045	117.45	113.66
Virginia and Truckee Railway	84,650	83,993	2,375,686	2,266,387	28.06	26.98
Western Pacific Railway	256,099	279,854	58,721,742	66,100,079	229.29	236.19
Totals	47,969,561	49,946,184	2,725,758,500	2,809,488,364		

GENERAL STATISTICS

Company	Average amount received from each passenger		Average receipts per passenger per mile		Passenger service train revenue per mile of road	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$2.12298	\$2.19698	\$0.02116	\$0.02198	\$3.722.58	\$3.846.95
Bullfrog-Goldfield Railway	3.30632	3.57981	.06512	.06578	809.91	867.14
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.		4.87767		.08669		172.95
Las Vegas and Tonopah Railroad	6.04137	5.76231	.05016	.05195	234.96	234.09
Nevada-California-Oregon Railway	4.87672	4.88838	.05809	.05810	793.19	794.28
Nevada Central Railway	6.57071	6.23791	.07375	.07810	245.81	241.96
Nevada Copper Belt Railway	1.12901	1.12437	.09298	.07683	488.70	770.99
Nevada Northern Railway	.49204	.52224	.02760	.02712	979.65	1,207.58
San Pedro, Los Angeles and Salt Lake Railroad	1.87653	2.03551	.02167	.02359	3,249.59	3,249.59
Silver Peak Railroad	1.74063	1.74794	.09947	.09988	295.91	263.27
Southern Pacific Company	.90801	.89010	.02217	.02284	5,659.53	5,762.28
Tonopah and Goldfield Railroad	2.90673	2.88676	.05514	.05483	1,241.76	1,241.76
Tonopah and Tidewater Railroad	5.96730	5.86527	.05072	.05178	316.23	324.95
Virginia and Truckee Railway	1.01258	.97154	.03908	.03601	1,492.36	1,413.85
Western Pacific Railway	4.44988	4.83853	.01941	.02049	1,335.53	1,574.38

GENERAL STATISTICS

Company	Passenger service train revenue per train mile		Number of tons of freight carried earning revenue		Number of tons of freight carried one mile	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	\$1.50530	\$1.55943	17,378,033	21,131,338	5,627,903,213	6,267,811,198
Bullfrog-Goldfield Railroad.....	.55520	.55033	19,357	23,357	1,402,736	1,694,796
Central Pacific Railway.....						
Eagle Salt Works Railroad.....		.60443		598		7,714
Eureka-Nevada Railway.....			384,226	7,925		420,459
Goldfield Consolidated M. & T. Co.	.38127	.38399	31,504	349,391	910,565	873,478
Las Vegas and Tonopah Railroad.....	1.23571	1.17565	43,905	41,681	4,982,364	6,068,727
Nevada-California-Oregon Railway.....	.60430	.58716	6,340	47,064	4,957,161	5,316,027
Nevada Central Railroad.....	.49761	.86807	149,477	5,983	528,770	491,561
Nevada Copper Belt Railroad.....	.80763	.99479	3,476,406	326,859	4,165,970	8,517,070
Nevada Northern Railroad.....	1.55506	1.84669	2,761,063	3,717,011	100,750,515	104,507,372
San Pedro, Los Angeles and Salt Lake Railroad.....	.43010	.37064	2,787	3,322,392	438,624,226	545,024,618
Silver Peak Railroad.....	1.70277	1.66409	19,619,320	2,307	48,772	40,372
Southern Pacific Company.....	1.77818	1.89607	380,735	20,515,403	4,326,466,059	4,759,687,174
Tonopah and Goldfield Railroad.....	.53847	.51514	52,924	313,138	10,499,063	9,625,423
Tonopah and Tidewater Railroad.....	.86282	.82301	108,218	66,687	6,636,476	8,502,209
Virginia and Truckee Railroad.....	.86350	1.07777	1,000,211	124,786	4,418,708	4,910,214
Western Pacific Railway.....				1,215,275	489,183,577	801,416,992
Totals.....			46,384,506	51,213,175	11,021,427,175	12,824,915,398

GENERAL STATISTICS

Company	Freight revenue per mile of road		Freight revenue per train mile		Operating revenue per mile of road	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$7,438.22	\$7,854.17	\$3,417.42	\$3,608.06	\$11,420.58	\$11,935.69
Bullfrog-Goldfield Railroad	881.55	866.96	1,579.31	1,562.33	1,206.64	1,193.03
Central Pacific Railway						
Eureka-Nevada Railway		46.69		1,707.78		46.69
Goldfield Consolidated M. & T. Co.		468.07		1,715.65		665.46
Las Vegas and Tonopah Railroad	22,993.99	22,067.52			22,993.99	22,067.52
Nevada-California-Oregon Railway	717.09	733.53	1,163.59	1,202.23	970.51	981.30
Nevada Central Railroad	969.51	946.49	1,556.00	2,190.03	1,778.32	1,693.26
Nevada Copper Belt Railroad	854.36	338.23	1,229.04	1,067.57	640.78	586.21
Nevada Northern Railway	2,512.56	4,375.26	3,255.62	4,970.27	3,160.01	5,442.78
San Pedro, Los Angeles and Salt Lake Railroad	8,092.36	8,660.79	6,883.76	6,104.43	9,146.24	9,962.37
Silver Peak Railroad	4,938.96	5,690.28	3,907.27	4,211.26	9,025.24	9,025.24
Southern Pacific Company	548.22	455.73	919.63	639.46	848.77	732.33
Tonopah and Goldfield Railroad	8,393.12	8,800.67	5,196.64	5,042.03	14,833.31	14,846.64
Tonopah and Tidewater Railroad	5,691.17	4,964.00	8,959.17	8,001.74	6,887.44	6,801.10
Virginia and Truckee Railroad	1,239.31	1,472.34	2,014.11	2,332.68	1,611.23	1,814.99
Western Pacific Railway	3,068.06	2,965.14	3,661.60	3,477.31	4,693.64	4,442.82
	4,200.16	4,947.58	2,704.13	2,851.16	5,611.86	6,566.93

GENERAL STATISTICS

Company	Operating revenue per train mile		Operating expenses per mile of road		Operating expenses per train mile	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$2,57435	\$2,71072	\$7,339.29	\$7,766.92	\$1,63212	\$1,72395
Bullfrog-Goldfield Railroad	2,16172	2,12619	1,197.06	1,117.77	2,14455	2,00142
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.		70778		275.25		4,17244
Las Vegas and Tonopah Railroad		2,30037		540.67		1,88900
Nevada-California-Oregon Railway	1,56362		7,302.61	965.33	1,48763	1,56706
Nevada Central Railroad	2,29640	1,60967	919.70	7,278.20	1,55480	1,12530
Nevada Copper Belt Railroad	1,55240	1,60263	1,204.03	1,188.83	1,22552	.81321
Nevada Northern Railroad	1,67751	3,04658	506.82	508.24	1,02509	1,48508
San Pedro, Los Angeles and Salt Lake Railroad	3,90632	3,81987	1,931.08	2,653.14	1,83963	1,83242
Silver Peak Railroad	2,56572	2,95322	4,304.96	4,831.19	2,03739	1,96453
Southern Pacific Company	1,23368	1,01150	891.98	6,003.73	1,29648	1,06686
Tonopah and Goldfield Railroad	2,97179	2,92148	8,242.06	772.41	1,70886	1,67592
Tonopah and Tidewater Railroad	6,57959	6,18882	4,172.36	8,516.81	3,96586	3,29780
Virginia and Truckee Railroad	2,57697	2,87555	1,091.12	3,357.63	1,74512	1,67381
Western Pacific Railway	2,48010	2,39597	3,242.25	3,153.71	1,76758	1,70073
	1,82716	2,05582	4,514.07	4,780.13	1,46973	1,49145

GENERAL STATISTICS

Company	Average operating revenue or deficit per mile of road		Average number of passen- gers per car mile		Average number of passen- gers per train mile	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$4,091.29	\$4,168.77	14	14	57	57
Bullfrog-Goldfield Railroad	9.58	76.26	7	5	7	7
Central Pacific Railroad						
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	15,691.43	14,779.32	6	6	6	6
Nevada-California-Oregon Railway	50.81	25.97	6	5	6	6
Nevada Central Railroad	574.29	504.43	12	6	18	17
Nevada Copper Belt Railroad	134.95	80.96	5	3	5	3
Nevada Northern Railway	1,229.02	2,789.64	4.75	9	4.67	9
San Pedro, Los Angeles and Salt Lake Railroad	4,841.29	5,131.17	16	19	24	32
Silver Peak Railroad	1,681.13	3,021.51	14	14	63	67
Southern Pacific Company	43.21	84.44	3		3	
Tonopah and Goldfield Railroad	6,091.25	6,329.83	16	16	65	63
Tonopah and Tidewater Railroad	2,715.06	2,943.47	12	13	25	26
Virginia and Truckee Railroad	520.11	755.04	4	4	8	7
Western Pacific Railroad	1,351.29	1,289.21	14	14	20	20
	1,097.78	1,808.80	9	10	41	48

Italic figures denote deficit.

GENERAL STATISTICS

Company	Average number of passenger cars per train mile		Average number of tons of freight per loaded car mile		Average number of tons of freight per train mile	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	6.09	6.11	14.62	15.55	326.44	350.93
Burlingame, Goldfield Railroad	1.79	1.71	12.34	14.23	30.37	36.96
Central Pacific Railroad						
East Salt Works Railroad						
Florida Nevada Railway				13.11		9.06
Goldfield Consolidated M. & T. Co.		1.00		6.47		13.34
Las Vegas and Tonopah Railroad	1.00		19.10	21.89	39.22	49.45
Nevada-California-Oregon Railway	2.44	3.50	7.88	7.47	36.97	31.91
Nevada Central Railroad	1.02	1.00	6.53	6.96	13.10	13.44
Nevada Copper Belt Railroad	2.00	1.00	32.24	36.36	130.00	223.45
Nevada Northern Railway	2.47	2.61	14.23	41.72	919.71	349.72
San Pedro, Los Angeles and Salt Lake Railroad	9.34	6.73	17.83	24.80	310.39	361.04
Silver Peak, Rich	4.00		25.01	30.30	40.39	431.90
Southern Pacific Company	3.06	3.55	17.01	17.76	43.11	431.12
Tonopah and Goldfield Railroad	3.92	3.97	27.79	24.29	152.03	139.53
Tonopah and Tidewater Railroad	2.52	2.51	17.01	18.73	53.68	74.48
Virginia and Truckee Railway	2.19	2.15	19.46	21.71	78.19	84.48
Western Pacific Railway	6.43	6.66	16.43	17.73	336.11	369.90

GENERAL STATISTICS

Company	Average number of freight cars per train mile		Average number of loaded cars per train mile		Average number of empty cars per train mile		Average mileage operated during year	
	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	31.36	31.77	22.32	23.53	8.09	8.32	7,967.93	8,218.27
Bullfrog-Goldfield Railroad	4.11	4.28	2.45	2.56	1.66	1.72	83.01	83.01
Central Pacific Railway								
Eagle Salt Works Railroad		1.00	.50	.50		.50		12.90
Eureka-Nevada Railway		3.84	2.84			1.10		84.00
Goldfield Consolidated M. & T. Co.							3.96	3.96
Las Vegas and Tonopah Railroad	3.39	3.70	2.08	2.26	1.30	1.44	200.46	200.46
Nevada-California-Oregon Railroad	7.29	11.47	4.64	6.91	2.41	3.50	217.39	238.58
Nevada Central Railroad	4.68	4.31	2.76	2.42	1.91	1.88	93.30	93.30
Nevada Copper Belt Railroad	8.24	12.62	4.03	6.35	2.92	5.16	41.50	41.50
Nevada Northern Railway	23.12	21.17	11.71	10.70	10.45	9.44	165.08	165.08
San Pedro, Los Angeles and Salt Lake Railroad	25.65	27.10	17.71	18.66	7.00	7.48	1,117.66	1,134.88
Silver Peak Railroad	2.13	.21	1.17	.12	.98	.09	17.50	17.50
Southern Pacific Company	36.23	35.26	25.29	24.25	9.95	10.03	6,220.31	6,318.61
Tonopah and Goldfield Railroad	11.87	10.66	6.98	6.27	4.30	3.84	110.41	110.62
Tonopah and Tidewater Railroad	4.84	6.39	3.45	3.77	1.39	1.61	180.85	180.85
Virginia and Truckee Railway	5.74	6.72	3.97	3.89	1.64	1.72	67.48	67.48
Western Pacific Railway	29.55	30.43	20.40	20.87	8.15	8.60	957.04	956.97
Totals							17,323.98	17,907.37

TONNAGE STATISTICS **TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR**

Company	Grain		Flour		Other mill products	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad						
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.		337		71		
Las Vegas and Tonopah Railroad	374	510	47	317		30
Nevada-California-Oregon Railroad	1,695	1,302	243	574		446
Nevada Central Railroad	122	176	176	123	110	
Nevada Copper Belt Railroad	8	68	106	346		
Nevada Northern Railway	373	1,267	1,306	1,247	4	38
San Pedro, Los Angeles and Salt Lake Railroad	60,859	85,504	17,077	18,412	25,321	27,682
Silver Peak Railroad	22	33	29	33	3	2
Southern Pacific Company	739,709	657,260	100,730	109,939	233,547	264,858
Tonopah and Goldfield Railroad	1,790	1,469	1,003	856	147	147
Tonopah and Tidewater Railroad	1,624	1,237	295	291	216	219
Virginia and Truckee Railway	64,192	36,745	470	388	38	109
Western Pacific Railway			4,649	10,545	6,740	6,945
Totals	2,086,374	2,213,012	578,780	597,132	558,210	542,280

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Hay		Tobacco		Cotton	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	430,811	458,627			40,976	46,454
Bullfrog-Goldfield Railroad.....	66	20				
Central Pacific Railroad.....						
Earle Salt Works Railway.....		15				
Eureka-Nevada Railway.....		365				
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....	204	208				
Nevada-California-Oregon Railroad.....	257	2,557				
Nevada Central Railroad.....	204	147				
Nevada Copper Belt Railroad.....	22	68				
Nevada Northern Railroad.....	476	615				
San Pedro, Los Angeles and Salt Lake Railroad.....	19,146	24,651	181	79		11
Silver Peak Railroad.....	11	35				
Southern Pacific Company.....	488,010	529,645	8,705	6,404	36,248	41,523
Tonopah and Goldfield Railroad.....	3,115	3,149				
Tonopah and Tidewater Railroad.....	176	121				
Virginia and Truckee Railroad.....	4,788	6,400				
Western Pacific Railroad.....	9,851	14,208	1,691	3,973	11,131	14,794
Totals	967,147	1,040,831	10,577	10,456	88,355	102,782

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Fruit and vegetables		Other products of agriculture		Total products of agriculture
	1912	1913	1912	1913	
Atchison, Topeka and Santa Fe Railway.....					
Bullfrog-Goldfield Railroad.....	1,030,632	1,174,477	234,909	212,777	3,647,037
Central Pacific Railroad.....	532	125			1,032
Eagle Salt Works Railroad.....					
Eureka-Nevada Railway.....					15
Goldfield Consolidated M. & T. Co.....		5			778
Goldfield Nevada-Oregon Railroad.....	1,770	2,297			
Las Vegas and Tonopah Railroad.....	532	865	105	155	2,304
Nevada-California-Oregon Railroad.....		13			6,339
Nevada Central Railroad.....		2,130			4,762
Nevada Copper Belt Railroad.....	4,594	1,403	101	55	2,657
Nevada Northern Railway.....	1,268	1,408			4,034
San Pedro, Los Angeles and Salt Lake Railroad.....	153,505	141,027	6,147	6,325	332,236
Silver Peak Railroad.....	63	36			133
Southern Pacific Company.....	2,049,958	2,069,921	86,136	109,200	3,806,043
Tonopah and Goldfield Railroad.....	2,753	1,933	24	49	8,780
Tonopah and Tidewater Railroad.....	603	137			1,281
Virginia and Truckee Railway.....	729	977	33	10	7,592
Western Pacific Railway.....	80,018	88,464	9,728	11,455	187,129
Totals.....	3,327,096	3,483,310	349,133	339,927	7,965,722
					8,330,280

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Live stock		Dressed meats		Other packing-house products	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	950,244	1,068,238	63,044	41,440	57,042	70,916
Bullfrog-Goldfield Railroad.....	12					
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....						
Eureka-Nevada Railway.....		550		4		
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....	215	219				
Nevada-California-Oregon Railway.....	12,393	17,490	15		50	27
Nevada Central Railroad.....	2,076	2,119				
Nevada Copper Belt Railroad.....	755	769				
Nevada Northern Railway.....	8,283	2,817			15	15
San Pedro, Los Angeles and Salt Lake Railroad.....	33,791	34,120	10	435	3,962	4,152
Silver Peak Railroad.....			61	48	20	18
Southern Pacific Company.....	401,259	466,769	24,291	31,853	38,892	40,191
Tonopah and Goldfield Railroad.....		638	637	542	245	343
Tonopah and Tidewater Railroad.....	401,478				17	
Virginia and Truckee Railway.....	7,529	9,722				
Western Pacific Railway.....	33,876	35,143	278		5,807	4,398
Totals.....	1,445,911	1,639,609	88,387	78,822	105,977	120,060

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Poultry, game and fish		Hides and leather		Wool	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	10,936	13,370	13,684	11,380	16,683	15,372
Bullfrog-Goldfield Railroad.....						
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....						
Eureka-Nevada Railway.....				2		91
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....	13		30	103	1,236	678
Nevada-California-Oregon Railway.....					222	182
Nevada Central Railroad.....					79	21
Nevada Copper Belt Railroad.....	10	10	71	84	386	349
Nevada Northern Railway.....	1,925	2,018	2,223	2,147	5,689	3,169
Silver Peak Railroad.....	20,947	25,778	18,163	16,917	12,628	11,678
Southern Pacific Company.....						23
Tonopah and Goldfield Railroad.....						
Tonopah and Tidewater Railroad.....					261	241
Virginia and Truckee Railway.....	4,260	3,835	1,566	2,624	2,423	1,403
Western Pacific Railway.....						
Totals	38,092	45,011	35,743	33,257	39,572	33,185

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Other products of animals		Total products of animals		Anthracite coal	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	177,135	146,614	1,288,768	1,368,830	36,580	59,671
Bullfrog-Goldfield Railroad.....			29			
Central Pacific Railway.....						
Eagle Salt Works Railroad.....				647		
Eureka-Nevada Railway.....						
Goldfield Consolidated M. & T. Co.....	8	36	223	255		
Las Vegas and Tonopah Railroad.....	126		13,862	18,238		
Nevada-California-Oregon Railway.....			2,236	2,271		
Nevada Central Railroad.....			849	780		
Nevada Copper Belt Railroad.....			3,822	3,486		
Nevada Northern Railway.....	153	220	78,410	74,489	108	963
San Pedro, Los Angeles and Salt Lake Railroad.....	25,002	18,786	19	82		
Silver Peak Railroad.....	25	86				
Southern Pacific Company.....	142,484	155,012	658,624	747,723	1,341	
Tonopah and Goldfield Railroad.....	99	63	1,469	1,614		
Tonopah and Tidewater Railroad.....			17			
Virginia and Truckee Railroad.....			7,790	9,983	38	40
Western Pacific Railway.....	4,267	5,043	52,483	62,454	1,409	4,285
Totals.....	850,201	835,812	2,108,888	2,230,756	39,580	64,359

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Bituminous coal		Coke		Ores	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	2,667,975	2,942,625	185,160	255,944	863,443	2,620,804
Bullfrog-Goldfield Railroad	2,753	1,182	19		867	85
Central Pacific Railway						
Eagle Salt Works Railroad		89				2,082
Eureka-Nevada Railway		486			364,223	349,891
Goldfield Consolidated M. & T. Co.					7,906	20,871
Las Vegas and Tonopah Railroad			248	178		812
Nevada-California-Oregon Railroad	5,104	2,946				241
Nevada Central Railroad	346	1,897			344	273,412
Nevada Copper Belt Railroad	1,847	2,823			101,306	3,332,450
Nevada Northern Railroad	140,723	2,099			3,124,897	798,833
San Pedro, Los Angeles and Salt Lake Railroad	243,882	111,867	12,662	38,699	409,876	
Silver Peak Railroad	290,146	226	589	745	80	608,983
Southern Pacific Company	8,839	231,890	46	153,359	587,687	238,989
Tonopah and Goldfield Railroad	8,839	11,840	96,607	374	308,537	4,187
Virginia and Tidewater Railroad	5,142	1,341	523	47	5,046	2,150
Western Pacific Railway	170,931	6,147	42	2,857	1,880	3,046
		219,558	2,554	447,455		
Totals	3,540,657	3,809,725	297,478		5,766,018	8,254,412

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Stone, sand, etc.		Other products of mines		Total products of mines	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	1,307,111	1,595,414	1,129,566	1,369,221	6,189,635	8,848,379
Bullfrog-Goldfield Railroad.....	710	1,480	2,663	7,809	6,432	10,499
Central Pacific Railway.....				544		583
Eagle Salt Works Railroad.....		30		27		2,696
Eureka-Nevada Railway.....				15		349,891
Goldfield Consolidated M. & T. Co.....				470		24,227
Las Vegas and Tonopah Railroad.....	248	217	50		364,226	1,839
Nevada-California-Oregon Railway.....	568	460	996		1,710	1,564
Nevada-Central Railroad.....					1,166	
Nevada Copper Belt Railroad.....	5,493	430	23,822	31,175	132,028	307,016
Nevada Northern Railway.....	54,342	66,273	32,664	32,313	8,363,215	3,543,718
San Pedro, Los Angeles and Salt Lake Railroad.....	568,213	564,766	93,031	131,214	1,967,286	1,755,061
Silver Peak Railroad.....					501	363
Southern Pacific Company.....	3,510,113	3,940,766	1,769,381	1,966,272	6,184,250	6,351,409
Tonopah and Goldfield Railroad.....	8,096	1,716	968	211	321,348	232,429
Tonopah and Tidewater Railroad.....	11	1,479	27,924	40,832	32,206	47,449
Virginia and Truckee Railroad.....	1,128	823	39,971	58,823	51,379	66,006
Western Pacific Railroad.....	86,669	132,207	6,662	12,111	270,125	374,704
Totals	5,528,389	5,705,653	3,117,188	3,650,737	18,289,280	21,932,241

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Lumber		Other forest products		Total forest products	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	842,616	975,590	460,141	477,387	1,302,757	1,452,977
Bullfrog-Goldfield Railroad.....	1,238	2,419	45		1,338	2,419
Central Pacific Railway.....						
Eagle Salt Works Railroad.....						
Eureka-Nevada Railway.....		1,379		26		1,405
Goldfield Consolidated M. & T. Co.....		5,515				
Las Vegas and Tonopah Railroad.....	5,778	7,708	512	296	6,290	8,011
Nevada-California-Oregon Railway.....	9,008	7,708	814	476	9,822	8,181
Nevada Central Railroad.....	430	223	107	112	537	333
Nevada Copper Belt Railroad.....	4,348	6,264	319	422	4,667	6,686
Nevada Northern Railway.....	11,705	19,768			11,705	19,768
San Pedro, Los Angeles and Salt Lake Railroad.....	464,646	566,068	2,929	3,532	467,574	569,600
Silver Peak Railroad.....	324	58	16	65	340	124
Southern Pacific Company.....	2,987,967	3,198,879	408,132	448,557	3,396,100	3,647,436
Tonopah and Goldfield Railroad.....	18,377	17,040	1,957	1,895	20,334	18,935
Tonopah and Nevada Water Railroad.....	1,750	3,096	835	2,135	2,585	5,231
Virginia and Truckee Railroad.....	9,371	5,550	8,890	9,507	18,261	15,057
Western Pacific Railway.....	121,074	142,060	6,717	10,969	127,791	153,024
Totals	4,478,336	4,949,624	890,125	963,821	5,368,461	5,913,445

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Petroleum and other oils		Sugar		Naval stores	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	372,554	561,735	90,245	134,927		
Bullfrog-Goldfield Railroad	180	276		18		
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway		284		9		
Goldfield Consolidated M. & T. Co.	3,637	2,828	37	78		
Las Vegas and Tonopah Railroad	1,731	903	451	601		
Nevada-California-Oregon Railway	137	119	54	72		
Nevada Central Railroad	422	1,991		21		
Nevada Copper Belt Railroad	64,496	86,606	296	313		
Nevada Northern Railway	25,082	22,044	36,017	28,121	27	62
San Pedro, Los Angeles and Salt Lake Railroad	101	213	19	17		
Silver Peak Railroad	233,827	332,684	264,217	302,277	574	1,374
Southern Pacific Company	6,962	10,234	365	332		
Tonopah and Goldfield Railroad	221	327		18		
Tonopah and Tidewater Railroad	7,725	7,744	183	244		
Virginia and Truckee Railroad	39,634	66,116	30,874	32,625	32	50
Western Pacific Railway						
Totals	756,599	1,092,093	422,758	499,568	633	1,476

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Iron, pig and bloom		Iron and steel rails		Other castings and machinery	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	36,869	48,176	58,080	54,428	313,287	431,085
Bullfrog-Goldfield Railroad			65	133	2,070	431,882
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad			37	39	573	339
Nevada Northern Railway			2,387	64	363	350
San Pedro, Los Angeles and Salt Lake Railroad	235	518	11	140	115	17
Silver Peak Railroad	7,612	8,422	1,236	617	254	240
Southern Pacific Company			8,571	3,471	1,339	1,515
Tonopah and Goldfield Railroad			21	18	44,183	54,390
Tonopah and Tidewater Railroad	60,184	58,137	108,389	140,618	99	102
Virginia and Truckee Railroad			92	249	344,067	361,707
Western Pacific Railway	3,508	5,819	389	133	2,845	1,138
			77	57	2,080	987
			10,674	17,820	687	474
					45,495	55,298
Totals	108,448	183,062	179,839	217,839	767,387	909,305

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Bar and sheet metal		Cement, brick and lime		Agricultural implements	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	186,695	188,707	1,271,218	1,460,212	54,273	74,097
Bullfrog-Goldfield Railroad	155	219	3,246	3,554		
Central Pacific Railway						
Eagle Salt Works Railroad						
Florida Nevada Railway		58		258		
Goldfield Consolidated M. & T. Co.	187	21	440	67		
Las Vegas and Tonopah Railroad	86	94	1,114	896	319	50
Nevada-California-Oregon Railway			1,123	40	27	
Nevada Copper Belt Railroad	233		1,237			
Nevada Northern Railway	1,138	1,045	4,081	5,444	42	18
San Pedro, Los Angeles and Salt Lake Railroad	18,405	23,821	186,727	211,874	1,689	1,624
Silver Peak Railroad	61	55	453	21,742		
Southern Pacific Company	93,400	178,574	1,417,168	1,508,185	28,085	31,474
Tonopah and Goldfield Railroad	436	943	3,666	3,236		
Tonopah and Tidewater Railroad	155	220	3,245	3,468		
Virginia and Truckee Railway	38	82	1,162	1,581	13	37
Western Pacific Railway	18,907	23,852	24,237	26,267	2,974	3,526
Totals	268,926	416,591	2,918,182	3,225,623	87,422	110,724

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Wagons, carriages, tools, etc.		Wines, liquors and beers		Household goods and furniture	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	46,835	62,422	108,333	125,210	111,790	124,446
Bullfrog-Goldfield Railroad			489	842	97	10
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.		3		57		
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	231	234	594	441	27	157
Nevada-Central Railroad			555	335	424	
Nevada Copper Belt Railroad	14		45	44		
Nevada Northern Railway		15	260	380	37	4
San Pedro, Los Angeles and Salt Lake Railroad		6,926	1,600	2,718	7	51
Silver Peak Railroad	4,995		11,993	12,826	8,554	9,657
Southern Pacific Company			101	100	9	13
Tonopah and Goldfield Railroad	29,769	39,973	254,698	280,780	46,371	53,919
Tonopah and Tidewater Railroad	19	16	2,038	2,200	16	68
Virginia and Truckee Railway		10	501	341	130	20
Western Pacific Railway	11	40	189	259	28	10
	4,871	8,238	21,494	27,793	11,720	12,920
Totals	86,807	117,927	408,190	453,796	179,180	201,275

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Other manufactures		Total manufactures		Merchandise	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	747,782	789,104	3,341,841	4,000,554	1,231,068	1,271,056
Bullfrog-Goldfield Railroad	2,209	2,309	8,510	7,848	1,801	1,945
Central Pacific Railroad						
Eagle Salt Works Railway						
Eureka-Nevada Railway		263				
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	749	944	6,380	4,788	1,699	1,943
Nevada-California-Oregon Railway	2,188	405	9,789	3,910	5,616	8,507
Nevada Central Railroad			507	232	793	793
Nevada Copper Belt Railroad			2,623	3,234	3,150	4,953
Nevada Northern Railway	95	448	79,736	100,852	9,064	10,538
San Pedro, Los Angeles and Salt Lake Railroad	47,308	59,013	401,164	446,947	125,902	135,982
Silver Peak Railroad	280	113	1,148	1,078	123	96
Southern Pacific Company	537,065	631,339	3,413,044	3,931,901	1,796,083	1,846,363
Tonopah and Goldfield Railroad	2,960	3,401	19,577	21,237	7,950	8,898
Tonopah and Tidewater Railroad	2,290	2,437	8,664	7,661	2,587	2,771
Virginia and Truckee Railway	1,414	1,873	11,527	12,401	11,149	10,096
Western Pacific Railway	61,591	72,458	275,971	352,231	74,579	78,221
Totals	1,411,095	1,517,021	7,579,459	8,916,311	3,192,306	3,063,273

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Miscellaneous		Total tonnage—Entire line	
	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	386,077	180,433	17,878,053	21,131,338
Bullfrog-Goldfield Railroad	245	128	19,387	23,387
Central Pacific Railroad				
Eagle Salt Works Railroad				
Elgin-Nevada Railway				
Goldfield Consolidated M. & T. Co.				
Las Vegas and Tonopah Railroad				
Nevada-California-Oregon Railroad				
Nevada Central Railroad	1,233	96	364,226	7,925
Nevada Copper Belt Railroad	114		31,504	349,331
Nevada Northern Railway	352	1,220	43,905	41,631
San Pedro, Los Angeles and Salt Lake Railroad	1,398	231	6,340	47,084
Silver Peak Railroad	14,709	1,506	149,477	336,859
Southern Pacific Company	33,492	34,016	3,476,405	3,717,011
Tonopah and Goldfield Railroad	402	36,242	2,761,083	3,822,352
Tonopah and Tidewater Railroad	437,438	438,731	2,787	2,307
Virginia and Truckee Railroad	2,076	2,362	19,619,320	20,515,403
Western Pacific Railway	6,065	6,892	380,735	313,133
	630	2,143	52,924	68,687
	11,262	17,402	108,218	124,786
			1,000,211	1,215,276
Totals	895,513	766,869	45,384,505	51,213,176

**TAXES ON REAL AND PERSONAL PROPERTY OF RAILROADS OPERATING IN NEVADA, CALIFORNIA,
UTAH, AND OREGON**
COVERING PROPERTY USED IN OPERATION ONLY

Company	Nevada		California		Utah		Oregon	
	1912	1913	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$530.12	\$708.94	\$720,336.02	\$48,875.54	\$3.97	\$3.83	\$5.92	\$5.34
Bullfrog-Goldfield Railroad	7,959.51	7,369.10						
Central Pacific Railroad	351,610.38	476,315.51	908,507.09	51,949.41	124,201.84	131,665.30	15,784.32	31,716.03
Eagle Salt Works Railroad		120.00						
Eureka-Nevada Railroad		1,103.85						
Goldfield Consolidated M. & T. Co.	4,244.02	4,985.25						
Las Vegas and Tonopah Railroad	19,100.29	15,484.70	225.00		50.00			
Nevada-California-Oregon Railroad	4,150.82	4,305.00	12,818.73	243.76				767.09
Nevada Central Railroad	3,953.05	3,696.35						
Nevada Copper Belt Railroad	3,196.00	5,437.09						
Nevada Northern Railroad	62,506.10	69,886.86						
San Pedro, Los Angeles and Salt Lake Railroad	76,065.21	92,600.86	83,873.76	30,991.05	139,847.96	163,544.00		
Silver Peak Railroad		776.41						
Southern Pacific Company			16,149.11	32,329.63	6.17	50.00	44.29	
Tonopah and Goldfield Railroad	28,420.77	27,120.98						
Tonopah and Tidewater Railroad	3,754.06	3,568.79	13,506.48	294.49				
Virginia and Truckee Railroad	23,633.42	20,249.78						
Western Pacific Railroad	74,101.23	115,804.57	74,280.04	35,837.53	34,229.11	37,284.64		
Totals	\$664,410.11	\$849,506.04	\$1,829,697.11	\$200,520.93	\$296,339.05	\$332,497.77	\$13,784.53	\$32,468.46

TOTAL TAXES PAID IN VARIOUS STATES

Company	Nevada		California		Utah	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$330.12	\$708.94	\$731,533.92	\$767,539.36	\$3.97	\$3.88
Bullfrog-Goldfield Railroad	7,969.51	7,969.10				
Central Pacific Railroad	568,662.96	568,662.96	1,069,431.10	1,018,899.28	139,687.97	137,059.68
Eagle Salt Works Railroad	464,178.17	120.00				
Eureka-Nevada Railway		1,103.86				
Goldfield Consolidated M. & T. Co.	4,244.02	4,966.25				
Las Vegas and Tonopah Railroad	19,100.29	15,434.70	225.00	235.00	50.00	50.00
Nevada-California-Oregon Railway	4,150.82	4,425.00	14,062.12	12,723.50		
Nevada Central Railroad	3,963.06	3,698.35				
Nevada Copper Belt Railroad	3,195.00	5,437.09				
Nevada Northern Railway	62,606.10	69,886.86				
San Pedro, Los Angeles and Salt Lake Railroad	76,065.21	92,600.86	84,123.76	175,401.31	139,897.96	163,594.00
Silver Peak Railroad	887.11	776.41				
Southern Pacific Company						
Tonopah and Goldfield Railroad	28,420.77	27,120.98	16,399.11	32,329.63	6.17	50.00
Tonopah and Tidewater Railroad	3,754.08	3,688.79	13,606.43	10,723.49		
Virginia and Truckee Railroad	23,633.42	20,249.78				
Western Pacific Railway	74,101.23	115,804.57	76,340.53	124,624.88	84,792.08	37,666.63
Totals	\$776,977.90	\$941,963.49	\$2,005,792.90	\$2,142,016.97	\$304,338.15	\$338,424.19

TOTAL TAXES PAID IN VARIOUS STATES

Company	Oregon		Various		Total taxes paid	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	85.92	85.34	\$2,823,645.47	\$3,299,124.43	\$3,556,089.40	\$4,067,431.90
Bullfinch, Goldfield Railroad	18,934.32	31,715.08	60,245.87	55,504.83	7,989.51	7,989.51
Central Pacific Railroad					1,742,377.43	1,812,322.73
East Salt Works Railroad						1,120,120.00
Enterprise Nevada Railroad						1,103.85
Goldfield Consolidated M. & T. Co.			23,497.29	23,659.57	32,741.31	28,644.82
Las Vegas and Tonopah Railroad			198.71		19,375.29	18,719.70
Nevada-California-Oregon Railway	411.65	897.09	64.19	825.73	18,841.30	18,841.32
Nevada Central Railroad			50.00		8,017.24	8,693.35
Nevada Copper Belt Railroad			5,860.01		3,245.00	5,437.09
Nevada Northern Railway					68,945.11	77,849.54
San Pedro, Los Angeles and Salt Lake Railroad				7,432.63	300,093.23	437,596.17
Silver Peak Railroad			10.00	6,000.00	897.11	897.11
Southern Pacific Company			177,163.58	154,143.49	193,815.15	188,523.12
Tonopah and Goldfield Railroad	244.29		1,620.00		29,982.45	27,745.50
Tonopah and Tidewater Railroad			1,265.02	1,170.14	18,624.58	16,482.42
Virginia and Truckee Railroad			720.08		24,353.45	21,010.19
Western Pacific Railway				760.41	185,233.94	273,086.13
Totals	\$19,596.18	\$32,589.46	\$3,099,231.17	\$3,550,276.28	\$6,205,993.30	\$7,005,289.39

TAXES PAID IN VARIOUS STATES

Railroad and State	1912	1913	Railroad and State	1912	1913
ATCHISON, TOPEKA AND SANTA FE RAILWAY— Illinois.....	\$197,497.65	\$190,590.50	NEVADA COPPER BELT RAILROAD— United States Government.....	\$50.00	
Iowa.....	20,182.83	22,062.96	NEVADA NORTHERN RAILWAY— United States Government.....	5,890.01	\$7,337.68
Missouri.....	123,683.66	119,966.98	Maine.....		125.00
Kansas.....	1,280,388.43	1,201,316.94			
Oklahoma.....	413,933.19	491,913.56	SAN PEDRO, LOS ANGELES AND SALT LAKE RAILROAD— General.....		6,000.00
Nebraska.....	267.77	193,289.58	SILVER PEAK RAILROAD— United States Government.....	10.00	
Colorado.....	179,689.87	473,688.06			
New Mexico.....	312,556.88	376,073.21	SOUTHERN PACIFIC COMPANY— Kentucky.....		182,097.35
Arizona.....	100,511.73	188,699.24	New York.....		1,830.00
New York.....	174.10	2.49	Arizona.....		15.00
Georgia.....	3.49	2.49	United States Government.....	23,224.23	67,963.13
Ohio.....	10.36	15.82	Pennsylvania.....	1,560.00	625.00
Michigan.....	15.11	41.67			
Canada.....	194,927.79	229,847.55	TONOPAH AND TIDEWATER RAILROAD— New Jersey.....	1,000.00	1,000.00
United States Government.....			United States Government.....	265.02	170.14
CENTRAL PACIFIC RAILWAY— Idaho.....	7.92	5.74	VIRGINIA AND TRUCKEE RAILWAY— United States Government.....		520.41
United States Government.....	60,237.95	56,496.09	City of Reno.....	720.08	240.00
GOLDFIELD CONSOLIDATED M. & T. Co.— United States Government.....	28,497.29	23,659.57			
NEVADA-CALIFORNIA-OREGON RAILWAY— United States Government.....	196.71	825.73			
NEVADA CENTRAL RAILROAD— United States Government.....	64.19				

CONSUMPTION OF FUEL BY LOCOMOTIVES

Company	Coal—Tons		Fuel oil—Gallons		Total fuel consumed—Tons	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway ^a	2,243,386	2,396,464	225,030,348	202,916,168	3,686,086	3,706,176
Bullfrog-Goldfield Railroad			334,877	324,880	2,679	2,699
Central Pacific Railroad						
Eagle Salt Works Railroad		32				32
Eureka-Nevada Railway		501		b46		503
Goldfield Consolidated M. & T. Co.			155,472	157,468	1,206	1,221
Las Vegas and Tonopah Railroad			1,000,244	999,560	6,954	6,960
Nevada-California-Oregon Railway			1,145,448	1,626,262	6,819	9,661
Nevada Central Railroad	745	717	b688		745	717
Nevada Copper Belt Railroad			534,072	560,269	2,063	
Nevada Northern Railroad	36,059	36,839		403,698	36,059	38,358
San Pedro, Los Angeles and Salt Lake Railroad	102,898	96,114	53,125,601	50,898,698	411,216	398,082
Silver Peak Railroad	71	22		10,272	71	143
Southern Pacific Company ^c	179,494	70,994	426,047,196	463,055,017	2,715,574	2,827,356
Tonopah and Goldfield Railroad			1,804,969	1,506,039	12,280	10,245
Tonopah and Tidewater Railroad			866,969	819,240	6,856	6,553
Virginia and Truckee Railroad			d702,557	e758,966	5,285	5,669
Western Pacific Railroad	95,054	77,588	25,880,736	32,309,340	249,106	269,905
Totals	2,657,707	2,678,271	736,619,167	755,346,133	7,141,885	7,282,189

^aWood, cords: 1912, 5,242; 1913, 5,199. ^bGasoline, c^oWood, cords: 1912, 169; 1913, 166. ^cGasoline, 9,384 gallons. ^dGasoline, 8,693 gallons.

OFFICERS OF RAILROAD COMPANIES OPERATING IN NEVADA**Atchison, Topeka and Santa Fe Railway Company**

Directors—Benjamin P. Cheney, Boston, Mass.; Augustus D. Juilliard, New York, N. Y.; T. DeWitt Cuyler, Philadelphia, Pa.; Edward P. Ripley, Chicago, Ill.; Byron L. Smith, Chicago, Ill.; Charles Steele, New York, N. Y.; Howel Jones, Topeka, Kans.; H. Rieman Duval, New York, N. Y.; Thomas P. Fowler, New York, N. Y.; Walker D. Hines, New York, N. Y.; Charles S. Glead, Topeka, Kans.; Edward J. Burwind, New York, N. Y.; John G. McCullough, New York, N. Y.; Henry C. Frick, Pittsburg, Pa.; Andrew C. Jobes, Merriam, Kans.

Principal Officers—President, E. P. Ripley, Chicago, Ill.; Vice-President, W. B. Storey, Chicago, Ill.; Vice-President, Edward Chambers, Chicago, Ill.; Vice-President, W. E. Hodges, Chicago, Ill.; Secretary and Treasurer, E. L. Copeland, Topeka, Kans.; Assistant Secretary and Treasurer, G. Holterhoff, Jr., Los Angeles, Cal.; General Counsel, Walker D. Hines, New York, N. Y.; General Solicitor, Gardiner Lathrop, Chicago, Ill.; Comptroller, D. L. Gallup, New York, N. Y.; Deputy Comptroller, A. E. Waterhouse, New York, N. Y.; General Auditor, W. E. Bailey, Chicago, Ill.; Assistant General Auditor, J. E. Baxter, Chicago, Ill.; Assistant General Auditor, A. L. Conrad, Chicago, Ill.; General Manager Eastern Lines, C. W. Kouns, Topeka, Kans.; General Manager Western Lines, F. C. Fox, Amarillo, Tex.; Acting General Manager Coast Lines, I. L. Hibbard, Los Angeles, Cal.; General Manager S. F. P. & P. Lines, W. A. Drake, Prescott, Ariz.; Chief Engineer System, C. F. W. Felt, Chicago, Ill.; General Superintendent, R. J. Parker, Topeka, Kans.; General Superintendent, E. Raymond, Newton, Kans.; General Superintendent, J. M. Kurn, La Junta, Colo.; General Superintendent, G. C. Starkweather, Amarillo, Tex.; Acting General Superintendent, J. R. Hitchcock, Los Angeles, Cal.; Freight Traffic Manager, F. B. Houghton, Chicago, Ill.; Passenger Traffic Manager, W. J. Black, Chicago, Ill.; General Freight Agent, J. R. Koontz, Topeka, Kans.; General Freight Agent, H. P. Anewalt, Los Angeles, Cal.; General Freight and Passenger Agent, P. P. Hastings, Prescott, Ariz.; General Passenger Agent, J. M. Connell, Topeka, Kans.; Land Commissioner, Howel Jones, Topeka, Kans.

Bullfrog-Goldfield Railroad Company

Directors—C. B. Zabriskie, New York, N. Y.; W. Hinckle Smith, Philadelphia, Pa.; Henry W. Biddle, Philadelphia, Pa.; Rudolph Ellis, Philadelphia, Pa.; Clinton A. Higbee, Philadelphia, Pa.; DeWitt Van Buskirk, Bayonne, N. J.; John S. Cook, Goldfield, Nevada.

Principal Officers—President, C. B. Zabriskie, New York, N. Y.; Vice-President, W. Hinckle Smith, Philadelphia, Pa.; Secretary and Treasurer, Clyde A. Heller, Philadelphia, Pa.; Auditor, B. W. Fernald, Oakland, Cal.; General Superintendent, John Ryan, Stagg, Cal.; Traffic Manager, W. R. Alberger, Oakland, Cal.; General Freight and Passenger Agent, F. M. Jenifer, Oakland, Cal.

Central Pacific Railway Company

Directors—Wm. Sproule, San Francisco, Cal.; E. E. Calvin, San Francisco, Cal.; Wm. F. Herrin, San Francisco, Cal.; Wm. Hood, San Francisco, Cal.; G. L. King, San Francisco, Cal.; T. F. Rowlands, Ogden, Utah; E. O. McCormick, San Francisco, Cal.; C. H. Redington, San Francisco, Cal.; W. R. Scott, San Francisco, Cal.

Principal Officers—President, Wm. F. Herrin, San Francisco, Cal.; Vice-

President, E. E. Calvin, San Francisco, Cal.; Vice-President, E. O. McCormick, San Francisco, Cal.; Second Vice-President, A. D. McDonald, New York, N. Y.; Third Vice-President, C. H. Redington, San Francisco, Cal.; Secretary, G. L. King, San Francisco, Cal.; Treasurer, A. K. Van Deventer, New York, N. Y.; Chief Counsel, Wm. F. Herrin, San Francisco, Cal.; Comptroller, A. D. McDonald, New York, N. Y.; Auditor, T. O. Edwards, San Francisco, Cal.; Chief Engineer, Wm. Hood, San Francisco, Cal.; Land Commissioner, B. A. McAllaster, San Francisco, Cal.

Eagle Salt Works Railroad Company

Directors—C. R. Lewers, San Francisco, Cal.; J. M. Fulton, Reno, Nevada; G. L. King, San Francisco, Cal.; E. Hickman, San Francisco, Cal.; E. H. Miller, San Francisco, Cal.

Principal Officers—President, E. H. Miller, San Francisco, Cal.; Vice-President, E. Hickman, San Francisco, Cal.; Secretary, G. L. King, San Francisco, Cal.; Treasurer, H. A. Jones, San Francisco, Cal.; Auditor, T. O. Edwards, San Francisco, Cal.

Eureka-Nevada Railway

(Nevada Transportation Company)

Directors—F. C. Sykes, San Francisco, Cal.; J. E. Green, Palo Alto, Cal.; G. A. Nicholls, San Francisco, Cal.; E. G. Fischer, San Francisco, Cal.; B. Brooks, San Francisco, Cal.

Principal Officers—President, F. C. Sykes, San Francisco, Cal.; Vice-President, G. C. Chadwick, San Francisco, Cal.; Secretary and Treasurer, L. H. Clar, San Francisco, Cal.; Auditor, J. H. McNabb, Palisade, Nevada; General Manager, J. E. Sexton, Palisade, Nevada.

Goldfield Consolidated Milling and Transportation Company

Directors—Geo. Wingfield, Reno, Nevada; J. D. Hubbard, Chicago, Ill.; J. H. Carstairs, Philadelphia, Pa.; A. H. Howe, Goldfield, Nevada; Albert Burch, Goldfield, Nevada; Henry M. Hoyt, Reno, Nevada.

Principal Officers—President, Geo. Wingfield, Reno, Nevada; Vice-President, J. D. Hubbard, Chicago, Ill.; Second Vice-President, W. E. Zobel, Goldfield, Nevada; Secretary and Treasurer, A. H. Howe, Goldfield, Nevada; General Counsel, Henry M. Hoyt, Reno, Nevada; General Manager, Albert Burch, Goldfield, Nevada; General Freight Agent, R. J. Davey, Goldfield, Nevada.

Las Vegas and Tonopah Railroad Company

Directors—W. A. Clark, Butte, Mont.; J. Ross Clark, Los Angeles, Cal.; W. A. Clark, Jr., Los Angeles, Cal.; C. O. Whittemore, Los Angeles, Cal.; H. C. Lee, Los Angeles, Cal.; W. H. Comstock, Los Angeles, Cal.; David Keith, Salt Lake City, Utah.

Principal Officers—President, J. Ross Clark, Los Angeles, Cal.; Vice-President, C. O. Whittemore, Los Angeles, Cal.; Secretary and Treasurer, W. H. Comstock, Los Angeles, Cal.; General Counsel, C. O. Whittemore, Los Angeles, Cal.; Auditor, J. Q. Goss, Jr., Los Angeles, Cal.; Chief Engineer, Arthur Maguire, Los Angeles, Cal.; Superintendent, F. M. Grace, Las Vegas, Nevada; Traffic Manager, C. E. Redman, Goldfield, Nevada.

Nevada-California-Oregon Railway

Directors—D. Comyn Moran, New York, N. Y.; A. D. Moran, New York, N. Y.; T. F. Dunaway, Reno, Nevada; R. P. Dunbar, Reno, Nevada; W. H. O'Neil, Reno, Nevada.

Principal Officers—President, D. Comyn Moran, New York, N. Y.; Vice-President, T. F. Dunaway, Reno, Nevada; Secretary, R. P. Dunbar, Reno, Nevada; Treasurer, A. D. Moran, New York, N. Y.; General Counsel, Jas. Glynn, Reno, Nevada; Auditor, R. P. Dunbar, Reno, Nevada; General Manager, T. F. Dunaway, Reno, Nevada; Chief Engineer, Geo. S. Oliver, Reno, Nevada; Traffic Manager, H. V. McNamara, Reno, Nevada.

Nevada Central Railroad Company

Director—J. G. Phelps Stokes, New York, N. Y.; I. N. Phelps Stokes, New York, N. Y.; Timothy Davenport, New York, N. Y.; J. W. McCulloch, New York, N. Y.; Daniel J. Shea, Austin, Nevada; Henry W. Dyer, Austin, Nevada; John M. Hiskey, Austin, Nevada.

Principal Officers—President, J. G. Phelps Stokes, New York, N. Y.; Vice-President, Timothy Davenport, New York, N. Y.; Secretary and Treasurer, J. M. Hiskey, Austin, Nevada; Auditor, J. M. Hiskey, Austin, Nevada; Assistant Auditor, H. W. Dyer, Austin, Nevada; General Manager, Jas. W. McCulloch, New York, N. Y.; General Superintendent, J. M. Hiskey, Austin, Nevada.

Nevada Copper Belt Railroad Company

Directors—W. C. Orem, Salt Lake City, Utah; James G. Berryhill, Des Moines, Iowa; A. J. Orem, Boston, Mass.; James G. Berryhill, Jr., Des Moines, Iowa; T. W. Boyer, Salt Lake City, Utah; J. J. Corum, Salt Lake City, Utah; W. H. Wattis, Ogden, Utah; F. M. Orem, Salt Lake City, Utah.

Principal Officers—President, W. C. Orem, Salt Lake City, Utah; First Vice-President, James G. Berryhill, Des Moines, Iowa; Second Vice-President, A. J. Orem, Boston, Mass.; Secretary and Treasurer, F. M. Orem, Salt Lake City, Utah; General Counsel, Henry I. Moore, Salt Lake City, Utah; Auditor, C. A. Chapman, Salt Lake City, Utah; General Manager, W. C. Orem, Salt Lake City, Utah; General Superintendent, Archie J. Orem, Ludwig, Nevada; Traffic Manager and Superintendent, F. J. Sullivan, Mason, Nevada.

Nevada Northern Railway Company

Directors—Daniel Guggenheim, New York, N. Y.; S. W. Eccles, New York, N. Y.; Murray Guggenheim, New York, N. Y.; F. W. Hills, New York, N. Y.; W. E. Bennett, New York, N. Y.; W. Hinckle Smith, Philadelphia, Pa.; Charles Hayden, Boston, Mass.; D. C. Jackling, Salt Lake City, Utah; C. V. MacNeill, Colorado Springs, Colo.

Principal Officers—President, S. W. Eccles, New York, N. Y.; First Vice-President, D. C. Jackling, Salt Lake City, Utah; Second Vice-President, W. E. Bennett, New York, N. Y.; Secretary, W. E. Bennett, New York, N. Y.; Treasurer, C. K. Lipman, New York, N. Y.; General Solicitor, C. H. Lindley, San Francisco, Cal.; Comptroller, F. W. Hills, New York, N. Y.; Auditor, Frank Roper, East Ely, Nevada; General Manager and Vice-President, L. G. Cannon, East Ely, Nevada; General Superintendent, T. J. Duddleson, East Ely, Nevada.

San Pedro, Los Angeles and Salt Lake Railroad Company

Directors—W. A. Clark, Butte, Mont.; R. S. Lovett, New York, N. Y.; C. B. Seger, New York, N. Y.; R. C. Kerens, St. Louis, Mo.; Thos. Kearns, Salt Lake City, Utah; W. H. Bancroft, Salt Lake City, Utah; J. Ross Clark, Los Angeles, Cal.; J. F. Satori, Los Angeles, Cal.; H. I. Bettis, Los Angeles, Cal.; W. G. Kerckhoff, Los Angeles, Cal.; T. F. Miller, Los Angeles, Cal.; W. H. Comstock, Los Angeles, Cal.

Principal Officers—President, W. A. Clark, New York, N. Y.; First Vice-

President, W. H. Bancroft, Salt Lake City, Utah; Second Vice-President, J. Ross Clark, Los Angeles, Cal.; Secretary, W. H. Comstock, Los Angeles, Cal.; Treasurer, W. H. Leete, Los Angeles, Cal.; General Counsel, A. S. Halstead, Los Angeles, Cal.; Auditor, H. I. Bettis, Los Angeles, Cal.; Assistant Auditor, J. E. Farrell, Los Angeles, Cal.; General Manager, H. C. Nutt, Los Angeles, Cal.; Chief Engineer, E. G. Tilton, Los Angeles, Cal.; Traffic Manager, F. A. Wann, Los Angeles, Cal.; General Freight Agent, T. M. Sloan, Los Angeles, Cal.; General Passenger Agent, T. C. Peck, Los Angeles, Cal.

Silver Peak Railroad Company

Directors—Geo. T. Oliver, Pittsburg, Pa.; Wm. Flinn, Pittsburg, Pa.; Wm. A. Bradley, Blair, Nevada; B. A. Rives, Blair, Nevada; S. H. Fine, Blair, Nevada.

Principal Officers—President, Geo. T. Oliver, Pittsburg, Pa.; First Vice-President, Wm. A. Bradley, Blair, Nevada; Secretary and Treasurer, B. A. Rives, Blair, Nevada; Auditor, W. C. Leach, Blair, Nevada; General Manager, Wm. A. Bradley, Blair, Nevada; General Freight and Passenger Agent, B. A. Rives, Blair, Nevada.

Southern Pacific Company

Directors—C. N. Bliss, New York, N. Y.; W. P. Bliss, New York, N. Y.; Henry W. de Forest, New York, N. Y.; Robert Goelet, Newport, R. I.; J. H. Harding, New York, N. Y.; Chas. W. Harkness, New York, N. Y.; H. E. Huntington, New York, N. Y.; J. N. Jarvis, New York, N. Y.; J. Kruttschnitt, New York, N. Y.; L. F. Loree, New York, N. Y.; Ogden Mills, Staatsburg, N. Y.; Lewis J. Spence, New York, N. Y.; Wm. Sproule, San Francisco, Cal.; E. P. Swenson, New York, N. Y.; J. N. Wallace, New York, N. Y.

Principal Officers—Chairman of the Executive Committee, J. Kruttschnitt, New York, N. Y.; President, Wm. Sproule, San Francisco, Cal.; Vice-President, Wm. F. Herrin, San Francisco, Cal.; Vice-President, A. D. McDonald, New York, N. Y.; Vice-President, W. A. Worthington, New York, N. Y.; Vice-President, E. E. Calvin, San Francisco, Cal.; Vice-President, E. O. McCormick, San Francisco, Cal.; Secretary, Hugh Neill, New York, N. Y.; Treasurer, A. K. Van Deventer, New York, N. Y.; Chief Counsel, Wm. F. Herrin, San Francisco, Cal.; General Counsel, Maxwell Evarts, New York, N. Y.; Controller, A. D. McDonald, New York, N. Y.; Assistant Controller, H. B. Johnson, New York, N. Y.; Assistant Controller, C. C. Barry, New York, N. Y.; Auditor, T. O. Edwards, San Francisco, Cal.; Assistant Director of Maintenance and Operation, W. A. Worthington, New York, N. Y.; Chief Engineer, Wm. Hood, San Francisco, Cal.; General Manager, W. R. Scott, San Francisco, Cal.; Freight Traffic Manager, G. W. Luce, San Francisco, Cal.; Director of Traffic, Lewis J. Spence, New York, N. Y.; General Freight Agent, C. J. Jones, San Francisco, Cal.; General Freight Agent, J. C. Stubbs, Los Angeles, Cal.; General Passenger Agent, Jas. Horsburgh, Jr., San Francisco, Cal.; Land Commissioner, B. A. McAllaster, San Francisco, Cal.

Tonopah and Goldfield Railroad Company

Directors—Jas. S. Austin, Philadelphia, Pa.; Samuel Bell, Jr., Philadelphia, Pa.; M. B. Cutter, Philadelphia, Pa.; C. A. Daniel, Philadelphia, Pa.; C. A. Higbee, Philadelphia, Pa.; Clyde A. Heller, Philadelphia, Pa.; Chas. E. Knox, Philadelphia, Pa.; Chas. R. Miller, Philadelphia, Pa.; Henry D. Moore, Philadelphia, Pa.; Richard G. Park, Westchester, Pa.; Wm. M. Potts, Wyebrooke, Pa.; J. Harvey Whiteman, Wilmington, Del.; Geo. Wingfield, Reno, Nevada.

Principal Officers—President, M. B. Cutter, Philadelphia, Pa.; First Vice-President, Jas. S. Austin, Philadelphia, Pa.; Second Vice-President, C. A. Higbee,

Philadelphia, Pa.; Secretary, Wm. F. Henshaw, Philadelphia, Pa.; Treasurer, C. A. Higbee, Philadelphia, Pa.; General Solicitor, J. Harvey Whiteman, Wilmington, Del.; General Counsel, Hugh H. Brown, Tonopah, Nevada; Assistant Treasurer, W. W. Charles, Tonopah, Nevada; Auditor, R. S. Titlow, Goldfield, Nevada; Chief Engineer, E. W. Cattermole, Goldfield, Nevada; Traffic Manager and Superintendent, W. D. Forster, Goldfield, Nevada.

Tonopah and Tidewater Railroad Company

Directors—F. M. Smith, Oakland, Cal.; C. B. Zabriskie, New York, N. Y.; DeWitt Van Buskirk, Bayonne, N. J.; J. A. Middleton, New York, N. Y.; J. N. Hardenberg, Jersey City, N. J.; Geo. Carragan, Bayonne, N. J.; Chas. A. Noe, Bayonne, N. J.

Principal Officers—President, F. M. Smith, Oakland, Cal.; Vice-President, DeWitt Van Buskirk, New York, N. Y.; Secretary and Treasurer, C. B. Zabriskie, New York, N. Y.; General Solicitor, DeWitt Van Buskirk, New York, N. Y.; Attorney, Walter D. Cole, Oakland, Cal.; Auditor, B. W. Fernald, Oakland, Cal.; General Manager, John Ryan, Stagg, Cal.; Superintendent, W. W. Cahill, Stagg, Cal.; Traffic Manager, W. R. Alberger, Oakland, Cal.; General Freight and Passenger Agent, F. M. Jenifer, Oakland, Cal.

Virginia and Truckee Railway

Directors—Ogden Mills, New York, N. Y.; A. M. Ardery, Carson City, Nevada; E. B. Yerington, Carson City, Nevada; Geo. T. Mills, Carson City, Nevada; W. E. Sharon, Virginia City, Nevada; J. W. Eckley, Virginia City, Nevada; W. E. F. Deal, Virginia City, Nevada; Jas. Newlands, Jr., San Francisco, Cal.; H. L. Griffiths, Carson City, Nevada.

Principal Officers—President, Ogden Mills, New York, N. Y.; First Vice-President, A. M. Ardery, Carson City, Nevada; Secretary, E. B. Yerington, Carson City, Nevada; Treasurer, Agency Bank of California, Virginia City, Nevada; Auditor, E. B. Yerington, Carson City, Nevada; General Manager, A. M. Ardery, Carson City, Nevada; Chief Engineer, W. H. Kirk, Carson City, Nevada; General Freight and Passenger Agent, E. B. Yerington, Carson City, Nevada.

Western Pacific Railway Company

Directors—Geo. J. Gould, New York, N. Y.; Edward T. Jeffery, New York, N. Y.; Edgar L. Marston, New York, N. Y.; F. W. M. Cutcheon, New York, N. Y.; Kingdon Gould, New York, N. Y.; S. C. Matthews, New York, N. Y.; Chas. H. Schlacks, San Francisco, Cal.; C. M. Levey, San Francisco, Cal.; Warren Olney, San Francisco, Cal.; Warren Olney, Jr., San Francisco, Cal.; Chas. W. Slack, San Francisco, Cal.; J. F. Evans, San Francisco, Cal.; W. J. Shotwell, San Francisco, Cal.

Principal Officers—President, E. T. Jeffery, New York, N. Y.; First Vice-President, C. H. Schlacks, San Francisco, Cal.; Second Vice-President, C. M. Levey, San Francisco, Cal.; Secretary, W. G. Bruen, San Francisco, Cal.; Treasurer, Chas. Elsey, San Francisco, Cal.; General Attorney, Warren Olney, Jr., San Francisco, Cal.; General Counsel, F. W. M. Cutcheon, New York, N. Y.; General Auditor, J. F. Evans, San Francisco, Cal.; General Manager, C. M. Levey, San Francisco, Cal.; Chief Engineer, T. J. Wyche, San Francisco, Cal.; Freight Traffic Manager, H. M. Adams, San Francisco, Cal.; General Freight Agent, Archibald Gray, San Francisco, Cal.; Passenger Traffic Manager, E. L. Lomax, San Francisco, Cal.

**TABULATED FIGURES DRAWN FROM MONTHLY REPORTS OF
RAILROADS OPERATING IN NEVADA, SHOWING NEVADA
INTRASTATE EARNINGS (GROSS), BY MONTHS, FOR THE
YEARS ENDING JUNE 30, 1912 AND 1913.**

1. The first part of the paper discusses the importance of the study of the history of the United States, and the need for a more comprehensive and accurate account of the country's past. It argues that the current historical narrative is often biased and incomplete, and that a more balanced and thorough approach is needed to understand the true nature of the nation's development.

MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	July		August		September	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$272.34	\$175.44	\$330.41	\$318.41	\$363.24	\$709.51
Eureka-Nevada Railway	7,666.78	5,460.54	8,016.27	4,090.96	7,018.66	4,549.49
Goldfield Consolidated M. & T. Co.	3,482.27	7,763.33	1,797.57	7,894.94	1,797.57	7,872.71
Las Vegas and Tonopah Railroad	2,418.88	3,962.40	2,708.21	1,640.26	9,147.38	1,560.94
Nevada-California-Oregon Railway	431.30	260.69	841.82	2,651.67	1,847.36	2,782.56
Nevada Central Railroad	1,310.36	18,112.53	1,963.36	12,240.33	1,844.06	1,543.22
Nevada Copper Belt Railroad	74,807.80	80,694.21	66,323.15	12,976.01	1,840.12	13,823.15
Nevada Northern Railway	1,845.22	945.79	2,897.47	86,776.09	60,863.96	76,800.11
San Pedro, Los Angeles and Salt Lake Railroad	213.09	1,026.33	1,623.07	1,623.07	270.27	680.33
Silver Peak Railroad	13,418.96	66.33	61.02	66.76	100.50	50.22
Southern Pacific Company	18,418.96	19,601.31	21,131.22	21,061.62	18,368.51	23,004.55
Tonopah and Goldfield Railroad	24,133.56	20,823.13	26,412.43	19,663.66	24,410.83	18,376.71
Tonopah and Tidewater Railroad	4,261.44	19.15	5,277.36	51.33	51.33	4,931.30
Virginia and Truckee Railway	4,966.45	4,666.92	5,277.36	5,168.32	6,673.54	1,453.87
Western Pacific Railway	1,539.09	966.92	574.88	969.94	1,483.72	1,215.87
Totals	\$138,634.33	\$163,558.54	\$137,068.70	\$163,913.65	\$126,036.49	\$156,296.55
Company	October		November		December	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$374.21	\$469.02	\$317.41	\$277.08	\$426.08	\$330.33
Eureka-Nevada Railway	8,031.86	3,874.83	7,502.19	4,862.09	7,581.47	2,513.59
Goldfield Consolidated M. & T. Co.	3,647.23	7,913.30	2,444.23	7,294.76	1,827.49	7,266.69
Las Vegas and Tonopah Railroad	3,643.53	1,604.63	2,631.76	1,640.07	1,850.80	1,776.63
Nevada-California-Oregon Railway	444.13	3,969.60	3,461.76	2,816.76	1,827.49	1,776.63
Nevada Central Railroad	1,864.97	3,833.92	3,461.76	1,827.49	1,850.80	1,776.63
Nevada Copper Belt Railroad	57,398.97	17,833.97	3,461.76	15,851.14	3,236.09	15,233.93
Nevada Northern Railway	4,381.57	14,624.23	51,568.23	67,990.93	55,270.06	63,418.49
San Pedro, Los Angeles and Salt Lake Railroad	175.66	831.14	1,560.59	1,376.31	919.06	68,776.83
Silver Peak Railroad	175.66	831.14	1,560.59	7.38	919.06	18.63
Southern Pacific Company	24,649.13	27,538.04	22,946.74	24,794.44	16,940.33	20,407.53
Tonopah and Goldfield Railroad	27,909.04	21,968.01	26,649.34	20,967.62	26,142.32	19,701.30
Tonopah and Tidewater Railroad	1,115.98	85.21	6,471.39	15.74	36.36	39.83
Virginia and Truckee Railroad	6,231.98	7,319.63	6,506.92	7,742.14	5,382.76	5,404.49
Western Pacific Railway	6,263.63	1,812.62	1,865.05	2,644.57	894.78	1,067.79
Totals	\$137,831.95	\$109,737.16	\$126,899.94	\$167,646.61	\$119,296.14	\$146,383.36

*Figures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	January		February		March	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$371.07	\$246.61	\$302.37	\$332.43	\$412.12	\$216.37
Bullfrog-Goldfield Railroad	7,720.20	2,097.04	7,332.69	1,334.93	7,930.59	3,259.69
Goldfield Consolidated M. & T. Co.	346.76	6,714.83	336.38	6,543.06	683.65	7,215.27
Las Vegas and Tonopah Railroad	636.51	1,749.23	1,144.40	1,641.80	1,908.01	1,908.64
Nevada-California-Oregon Railroad	200.85	1,062.97	256.58	1,136.63	213.60	1,238.01
Nevada Central Railroad	8,449.53	127.73	12,901.17	207.17	15,776.83	312.54
Nevada Copper Belt Railroad	66,720.25	16,334.99	61,662.72	11,530.29	74,041.23	14,394.55
Nevada Northern Railroad	220.14	68,578.13	443.46	73,796.53	854.74	86,494.41
San Pedro, Los Angeles and Salt Lake Railroad	127.83	597.63	68.58	476.12	71.71	680.21
Silver Peak Railroad	15,877.44	38.06	18,739.76	217.79	25,346.34	18,333.49
Southern Pacific Company ^a	24,387.62	18,643.05	24,478.82	19,212.57	28,333.14	19,008.67
Tonopah and Goldfield Railroad	23.63	18,508.39	23.37	18,506.80	15.69	38.76
Tonopah and Tidewater Railroad	5,150.32	30.24	4,314.13	33.43	5,994.79	7,620.50
Virginia and Truckee Railroad	768.00	4,093.49	437.07	3,911.44	498.07	1,206.12
Western Pacific Railroad	\$131,000.05	\$683.38	\$132,300.56	\$582.15	\$159,247.96	\$162,951.10
Totals		\$139,605.97		\$140,432.23		
Company	April		May		June	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$248.46	\$238.24	\$374.60	\$353.71	\$303.16	\$235.60
Bullfrog-Goldfield Railroad	7,234.67	3,739.84	7,673.55	3,027.20	7,442.16	337.67
Goldfield Consolidated M. & T. Co.	1,018.62	6,539.86	1,009.16	7,153.43	1,457.69	7,466.51
Las Vegas and Tonopah Railroad	2,066.86	1,646.39	2,039.91	1,124.09	3,059.03	921.33
Nevada-California-Oregon Railroad	836.59	1,962.27	836.81	1,703.33	856.24	2,146.77
Nevada Central Railroad	15,591.45	838.13	14,136.73	232.07	13,217.21	268.76
Nevada Copper Belt Railroad	75,086.63	14,096.25	81,011.32	15,937.99	79,541.63	14,313.51
Nevada Northern Railroad	313.71	75,086.98	772.40	84,531.57	722.51	80,734.63
San Pedro, Los Angeles and Salt Lake Railroad	103.13	735.24	158.22	84,457.88	95.99	864.70
Silver Peak Railroad	24,188.85	134.21	30,334.32	73.81	24,603.37	245.75
Southern Pacific Company ^a	24,440.73	25,517.86	28,773.24	19,662.19	52,782.21	20,455.85
Tonopah and Goldfield Railroad	47.23	17,166.16	17.01	19,156.06	37.72	19,040.08
Tonopah and Tidewater Railroad	4,695.69	41.85	4,540.73	52.03	3,960.46	40.34
Virginia and Truckee Railroad	833.95	5,850.73	875.97	4,964.42	786.11	4,593.85
Western Pacific Railroad	\$156,300.68	\$1,107.62	\$167,534.05	\$1,876.54	\$163,250.49	\$91.72
Totals		\$164,771.63		\$160,250.81		\$153,042.62

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	Total for six months ending Dec. 31				Total for year ending June 30			
	1911	1912	1912	1912	1912	1912	1912	1912
Atchison, Topeka and Santa Fe Railway	\$2,083.64	\$2,340.39	\$1,876.78	\$1,503.51	\$3,960.42			\$3,943.90
Bullfrog-Goldfield Railroad		25,121.50		14,196.27				39,317.77
Eureka-Nevada Railway		45,767.23		41,638.05				87,405.28
Goldfield Consolidated M. & T. Co.		6,197.90		8,980.00				17,966.53
Las Vegas and Tonopah Railroad		15,802.25		4,912.26				26,626.33
Nevada-California-Oregon Railway		1,984.73		11,081.23				3,471.28
Nevada Central Railroad		2,314.81		1,629.94				3,471.28
Nevada Copper Belt Railroad		13,925.80		85,062.92				181,553.49
Nevada Northern Railway		384,008.36		438,063.83				863,796.76
San Pedro, Los Angeles and Salt Lake Railroad		365,716.36		469,787.40				9,812.90
Silver Peak Railroad		6,144.90		2,831.96				8,976.86
Southern Pacific Company ^a		913.07		886.89				1,633.83
Tonopah and Goldfield Railroad		122,963.88		139,090.07				262,053.95
Tonopah and Tidewater Railroad		155,329.57		146,200.21				301,762.55
Virginia and Truckee Railroad		34,334.57		171.92				484.17
Western Pacific Railroad		12,621.23		28,655.89				66,147.16
Totals	\$784,667.55	\$896,535.97	\$909,633.79	\$911,094.36	\$1,684,301.34			\$1,807,630.33

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	July			August		September	
	1911	1912	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway	\$0.95			\$1.90			
Bullfrog-Goldfield Railroad	586.10			896.76			
Eureka-Nevada Railway							
Goldfield Consolidated M. & T. Co.							
Las Vegas and Tonopah Railroad							
Nevada-California-Oregon Railway							
Nevada Central Railroad							
Nevada Copper Belt Railroad							
Nevada Northern Railway							
San Pedro, Los Angeles and Salt Lake Railroad							
Silver Peak Railroad							
Southern Pacific Company ^a							
Tonopah and Goldfield Railroad							
Tonopah and Tidewater Railroad							
Virginia and Truckee Railroad							
Western Pacific Railroad							
Totals	\$64,758.30	\$74,385.48	\$80,953.43	\$62,604.53	\$80,812.22		\$65,014.69

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	October		November		December	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway	\$0.95	\$371.40	\$0.95	\$331.70	\$314.85	\$378.00
Bullfrog-Goldfield Railroad	302.62	1,324.60	346.10	1,340.45		1,145.70
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	1,632.69	1,650.15	1,781.71	1,866.54	1,319.02	1,923.35
Nevada-California-Oregon Railway	1,287.63	1,386.16	1,372.60	1,221.96	1,251.89	1,081.04
Nevada Central Railroad	1,862.30	1,208.30	1,466.80	1,003.95	1,336.85	1,443.36
Nevada Copper Belt Railroad	1,442.85	2,202.40	1,395.75	2,202.40	1,524.96	2,440.70
Nevada Northern Railway	6,452.02	9,873.35	6,201.29	6,201.29	6,786.86	9,007.35
San Pedro, Los Angeles and Salt Lake Railroad	1,577.01	1,724.94	1,446.63	2,068.58	1,347.28	2,125.98
Silver Peak Railroad	274.15	336.90	272.15	309.05	276.50	244.00
Southern Pacific Company	29,144.76	33,264.35	27,851.38	28,334.68	26,868.53	34,233.07
Tonopah and Goldfield Railroad	5,429.55	6,987.76	5,353.29	5,629.08	4,662.37	6,153.02
Tonopah and Tidewater Railroad	24.20	24.65	86.70	29.50	28.63	41.15
Virginia and Truckee Railroad	7,215.71	5,843.66	6,459.35	6,099.31	6,583.33	5,649.90
Western Pacific Railway	1,794.44	1,878.28	1,591.82	1,777.43	1,332.14	1,451.42
Totals	\$53,650.22	\$67,332.04	\$54,573.38	\$57,935.82	\$53,650.22	\$67,332.04

Company	January		February		March	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$230.17	\$294.20	\$249.85	\$222.15	\$325.35	\$287.40
Bullfrog-Goldfield Railroad		1,111.65		711.25		1,328.35
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	1,846.04	1,711.95	1,356.95	1,884.01	1,418.10	1,605.20
Nevada-California-Oregon Railway	963.09	914.37	972.21	953.32	1,055.05	1,309.20
Nevada Central Railroad	1,165.15	1,007.00	1,062.30	1,023.90	1,255.35	773.65
Nevada Copper Belt Railroad	1,514.45	2,866.80	1,663.75	2,274.10	1,775.60	2,194.13
Nevada Northern Railway	5,769.67	10,906.16	6,470.39	8,647.75	6,953.62	7,955.57
San Pedro, Los Angeles and Salt Lake Railroad	1,799.14	1,573.95	1,704.41	1,713.52	1,716.23	2,411.47
Silver Peak Railroad	236.15	320.69	237.04	312.40	312.40	280.80
Southern Pacific Company	22,531.15	32,103.47	23,873.68	36,122.77	27,985.37	37,866.72
Tonopah and Goldfield Railroad	4,187.74	5,679.73	5,060.80	5,154.74	5,150.42	6,067.93
Tonopah and Tidewater Railroad	33.25	25.00	20.00	31.80	16.20	27.80
Virginia and Truckee Railroad	5,270.60	5,532.80	5,507.47	5,792.68	5,641.55	6,533.00
Western Pacific Railway	884.05	884.05	1,130.40	1,018.60	1,245.30	1,812.33
Totals	\$46,069.67	\$64,478.13	\$49,457.32	\$65,895.90	\$54,997.49	\$70,288.05

*Figures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	April		May		June	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railway	\$341.08	\$254.75	\$352.12	\$405.37	\$427.11	\$235.60
Eureka-Nevada Railway		1,157.35		982.00		1,170.55
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	1,617.86	1,819.28	1,933.68	3,205.11	1,665.25	1,766.34
Nevada-California-Oregon Railroad	1,762.19	1,238.09	2,089.25	1,406.33	1,983.70	1,395.05
Nevada Central Railroad	1,980.85	1,007.20	1,627.20	1,368.95	1,224.05	1,608.35
Nevada Copper Belt Railroad	1,853.45	1,895.02	2,169.79	2,541.25	2,109.90	2,168.47
Nevada Northern Railroad	8,379.51	7,947.93	6,995.45	8,477.54	7,681.68	7,182.08
San Pedro, Los Angeles and Salt Lake Railroad	1,749.93	2,741.02	2,081.94	1,922.77	2,137.31	1,707.69
Silver Peak Railroad	337.75	298.65	339.70	277.10	500.75	274.77
Southern Pacific Company ^a	29,270.36	36,172.70	31,302.38	35,824.22	29,892.58	35,259.28
Tonopah and Goldfield Railroad	5,596.51	5,635.20	6,626.97	7,006.39	6,453.12	5,667.97
Tonopah and Tidewater Railroad	33.35	23.55	25.10	45.20	80.25	30.35
Virginia and Truckee Railroad	5,962.82	5,855.20	6,473.35	6,306.15	7,235.27	6,414.35
Western Pacific Railway	1,485.15	2,198.00	1,630.19	2,593.49	1,528.81	2,362.79
Totals	\$59,650.81	\$68,215.94	\$63,642.12	\$72,366.92	\$63,052.14	\$67,213.64

Company	Total for six months ending Dec. 31		Total for six months ending June 30		Total for year ending June 30	
	1911	1912	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railway	\$4.75	\$2,098.00	\$1,919.68	\$1,699.47	\$4.75	\$3,797.47
Eureka-Nevada Railway	2,273.62	7,313.40		6,461.15	4,193.30	13,774.55
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	11,061.20	10,196.55	9,343.89	11,991.89	20,425.09	22,188.55
Nevada-California-Oregon Railroad	8,528.66	9,127.00	9,306.49	7,184.41	17,835.15	16,311.41
Nevada Central Railroad	9,538.60	7,665.26	7,735.81	6,785.45	17,274.41	14,453.71
Nevada Copper Belt Railroad	8,243.30	13,504.30	11,206.84	13,443.77	19,450.14	26,948.67
Nevada Northern Railroad	38,657.95	50,153.43	42,311.47	51,277.03	80,969.42	101,430.46
San Pedro, Los Angeles and Salt Lake Railroad	10,450.82	12,157.60	11,189.01	11,805.42	21,639.83	23,963.02
Silver Peak Railroad	2,075.57	1,993.05	2,049.80	1,674.14	4,125.37	3,667.19
Southern Pacific Company ^a	174,626.63	192,765.63	164,696.83	213,368.96	339,323.46	406,135.64
Tonopah and Goldfield Railroad	32,550.53	36,158.64	33,006.56	35,234.96	66,557.09	71,393.60
Tonopah and Tidewater Railroad	186.20	164.05	208.20	187.20	384.40	351.25
Virginia and Truckee Railroad	44,530.33	39,343.30	35,991.06	38,416.08	80,521.39	75,769.98
Western Pacific Railway	10,455.27	11,125.49	7,903.91	10,925.65	18,359.18	22,051.14
Totals	\$353,203.43	\$398,767.46	\$336,869.55	\$408,453.58	\$590,072.98	\$802,226.04

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	July		August		September	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway	\$43.14	\$44.48	\$43.10	\$44.13	\$43.42	\$43.33
Bullfrog-Goldfield Railroad	104.00	107.12	146.63	142.11	169.67	192.60
Eureka-Nevada Railway		96.27		78.18		126.28
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	327.95	559.14	340.59	525.06	619.29	356.19
Nevada-California-Oregon Railway	289.83	281.20	328.64	278.03	334.61	307.67
Nevada Central Railroad						
Nevada Copper Belt Railroad	315.01	1,058.23	312.10	866.96	276.33	950.61
San Pedro, Los Angeles and Salt Lake Railroad	157.20	293.25	157.05	276.50	195.50	211.75
Silver Peak Railroad	83.35	73.95	84.74	83.12	92.98	86.74
Southern Pacific Company ^a	1,298.00	1,410.48	1,350.27	1,276.75	1,530.36	1,308.60
Tonopah and Goldfield Railroad	2,899.55	3,362.90	2,508.81	2,715.32	3,945.76	2,796.79
Tonopah and Tidewater Railroad	21.56	7.93	15.29	6.66	16.54	5.47
Virginia and Truckee Railroad	407.74	184.79	187.43	1,227.94	85.09	194.00
Western Pacific Railroad	65.61	62.75	95.14	76.27	75.96	87.40
Totals	\$6,012.94	\$7,562.49	\$5,559.79	\$7,597.03	\$7,396.11	\$6,693.33
Company	October		November		December	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway	\$45.09	\$43.08	\$43.31	\$43.02	\$43.09	\$42.98
Bullfrog-Goldfield Railroad	222.69	151.15	116.51	190.75	114.79	160.49
Eureka-Nevada Railway		224.65		140.69		201.36
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	820.27	358.94	316.19	358.68	294.14	338.70
Nevada-California-Oregon Railway	312.33	849.36	339.60	351.67	396.59	361.93
Nevada Central Railroad						
Nevada Copper Belt Railroad	296.68	1,056.65	297.96	1,011.25	345.56	1,206.05
San Pedro, Los Angeles and Salt Lake Railroad	98.20	38.00	62.60	76.25	91.40	516.95
Silver Peak Railroad	64.51	87.43	97.12	90.40	86.92	91.55
Southern Pacific Company ^a	1,856.77	1,701.82	2,551.17	2,690.53	2,962.81	2,659.31
Tonopah and Goldfield Railroad	3,138.96	2,549.62	3,193.92	3,048.25	2,953.64	3,188.46
Tonopah and Tidewater Railroad	20.78	7.26	16.27	5.42	23.07	8.43
Virginia and Truckee Railroad	108.02	125.97	262.70	98.24	270.74	43.29
Western Pacific Railroad	84.30	87.98	40.60	46.22	46.84	49.30
Totals	\$6,568.50	\$6,781.92	\$7,337.95	\$8,182.38	\$7,560.59	\$8,893.80

^a Figures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	January			February			March		
	1912	1913	1913	1912	1913	1913	1912	1913	
Atchison, Topeka and Santa Fe Railway									
Bullfrog-Goldfield Railroad	\$42.98	\$43.08	\$43.10	\$43.04	\$43.10	\$43.08	\$43.77	\$43.77	
Eureka-Nevada Railroad	98.51	42.78	58.71	74.64	120.23	94.92	53.63	53.63	
Goldfield Consolidated M. & T. Co.		170.88					230.43	230.43	
Las Vegas and Tonopah Railroad	309.64	348.39	328.39	338.23	328.39	386.46	349.59	349.59	
Nevada-California-Oregon Railroad	313.01	319.51	299.51	298.92	299.51	289.29	300.37	300.37	
Nevada Central Railroad									
Nevada Copper Belt Railroad	819.97	1,653.57	1,595.67	362.90	1,595.67	197.29	1,791.74	1,791.74	
Nevada Northern Railroad	176.00	176.50	174.25	176.00	174.25	189.75	225.15	225.15	
San Pedro, Los Angeles and Salt Lake Railroad									
Silver Peak Railroad	98.43	104.88	70.95	103.00	70.95	94.61	20.55	20.55	
Southern Pacific Company ^a	2,977.99	2,223.25	3,293.90	2,638.35	3,293.90	2,457.26	1,512.11	1,512.11	
Tonopah and Goldfield Railroad	3,487.53	2,783.85	2,918.26	3,318.85	2,918.26	3,354.43	3,371.74	3,371.74	
Tonopah and Tidewater Railroad	19.27	5.38	7.83	16.87	7.83	17.95	6.58	6.58	
Virginia and Truckee Railroad	251.36	135.63	132.19	81.47	132.19	135.34	237.79	237.79	
Western Pacific Railroad	24.60	33.05	27.87	29.80	27.87	36.88	54.21	54.21	
Totals	\$8,614.29	\$8,040.75	\$9,000.85	\$7,482.07	\$9,000.85	\$7,299.26	\$8,187.66	\$8,187.66	
Company									
Atchison, Topeka and Santa Fe Railway									
Bullfrog-Goldfield Railroad	\$48.88	\$43.10	\$43.04	\$43.38	\$43.04	\$340.82	\$396.62	\$396.62	
Eureka-Nevada Railroad	143.35	63.33	102.15	105.68	216.03	96.64	66.47	66.47	
Goldfield Consolidated M. & T. Co.		182.23					279.21	279.21	
Las Vegas and Tonopah Railroad	428.09	383.84	324.28	423.96	324.28	669.01	349.00	349.00	
Nevada-California-Oregon Railroad	319.71	325.93	248.20	294.25	248.20	284.72	277.76	277.76	
Nevada Central Railroad									
Nevada Copper Belt Railroad	980.09	1,746.76	1,536.10	947.12	1,536.10	888.87	1,272.35	1,272.35	
Nevada Northern Railroad	266.75	360.40	405.85	198.00	405.85	293.45	399.60	399.60	
San Pedro, Los Angeles and Salt Lake Railroad									
Silver Peak Railroad	88.70	152.69	28.10	99.20	28.10	62.45	137.18	137.18	
Southern Pacific Company ^a	1,351.80	2,201.27	476.91	1,624.29	476.91	2,304.85	3,158.18	3,158.18	
Tonopah and Goldfield Railroad	2,627.61	2,966.02	3,077.25	2,559.81	3,077.25	2,431.76	2,949.21	2,949.21	
Tonopah and Tidewater Railroad	16.21	18.29	11.84	18.29	11.84	18.30	8.46	8.46	
Virginia and Truckee Railroad	83.60	273.57	328.30	146.27	328.30	117.78	567.70	567.70	
Western Pacific Railroad	59.53	77.95	102.96	45.60	102.96	46.74	173.30	173.30	
Totals	\$6,259.22	\$3,784.86	\$6,901.01	\$6,705.85	\$6,901.01	\$7,526.39	\$10,025.04	\$10,025.04	

^aFigures shown for Southern Pacific Company include earnings of Nevada and California branch.

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	Total for six months ending Dec. 31			Total for six months ending June 30			Total for year ending June 30		
	1911	1912	1913	1912	1913	1912	1913		
Atchison, Topeka and Santa Fe Railway	\$281.15	\$281.02	\$562.13	\$562.13	\$602.71	\$623.28	\$683.73		
Bullfrog-Goldfield Railroad	874.29	944.14	608.74	608.74	387.07	1,488.08	1,831.21		
Eureka-Nevada Railway		887.43			1,196.01		2,066.44		
Goldfield Consolidated M. & T. Co.									
Las Vegas and Tonopah Railroad	2,218.43	2,586.49	2,555.39	2,555.39	2,083.49	4,773.82	4,820.20		
Nevada-California-Oregon Railway	2,001.60	1,909.86	1,779.90	1,779.90	1,771.28	3,781.50	3,681.14		
Nevada Central Railroad									
Nevada Copper Belt Railroad	1,844.14	6,149.75	4,146.24	4,146.24	9,516.19	6,990.38	16,665.94		
Nevada Northern Railroad	761.95	1,412.70	1,291.95	1,291.95	1,741.75	2,063.90	3,154.45		
San Pedro, Los Angeles and Salt Lake Railroad									
Silver Peak Railroad	511.62	513.19	541.39	541.39	514.35	1,063.01	1,027.54		
Southern Pacific Company*	11,649.38	11,047.49	13,254.54	13,254.54	12,865.62	24,803.92	23,913.11		
Tonopah and Goldfield Railroad	18,640.64	17,658.34	17,981.94	17,981.94	18,066.33	36,622.58	35,724.67		
Tonopah and Tidewater Railroad	113.51	41.17	106.89	106.89	47.86	230.40	89.08		
Virginia and Truckee Railway	1,251.72	1,875.23	815.82	815.82	1,675.17	2,067.54	3,550.40		
Western Pacific Railway	407.45	409.92	242.15	242.15	469.34	649.50	879.25		
Totals	\$40,435.88	\$45,626.95	\$50,940.17	\$43,887.08	\$50,940.17	\$84,322.96	\$96,567.12		

MONTHLY REVENUE FROM INTRASTATE OPERATIONS, OTHER THAN TRANSPORTATION, OF RAILROADS IN NEVADA

Company	July		August		September	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company*						
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railroad						
Western Pacific Railroad						
Totals						

*Figures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

MONTHLY REVENUE FROM INTRASTATE OPERATIONS, OTHER THAN TRANSPORTATION,
OF RAILROADS IN NEVADA

Company	October		November		December	
	1911	1912	1911	1912	1911	1912
Atchison, Topeka and Santa Fe Railway		\$12.89	\$2.88	\$22.43	\$27.76	\$65.84
Bullfrog-Goldfield Railroad	\$66.82	61.34	48.06	16.00	23.26	23.26
Eureka-Nevada Railroad	38.55	170.59		1.96	47.60	17.74
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	16.99	19.87	29.84	19.57	23.61	21.95
Nevada-California-Oregon Railroad	48.53	45.96	31.76	26.54	13.69	25.95
Nevada Central Railroad	68.72	62.04	48.59	59.67	47.57	71.14
Nevada Copper Belt Railroad	467.65	76.52	394.44	79.67	68.23	.87
Nevada Northern Railroad	144.00	420.00	148.00	373.00	128.00	593.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	5.00	5.00	5.00	23.90	5.00	5.35
Southern Pacific Company*	2,064.62	2,397.84	2,723.78	2,499.97	2,378.96	2,263.90
Tonopah and Goldfield Railroad	266.95	243.53	533.11	296.77	314.36	298.71
Tonopah and Tidewater Railroad	21.00	24.00	21.00	21.00	21.51	20.53
Virginia and Truckee Railroad	70.19	47.66	26.71	67.99	82.45	98.46
Western Pacific Railroad	80.73	103.41	169.56	70.90	70.97	94.93
Totals	\$3,359.75	\$3,680.64	\$3,980.71	\$3,581.37	\$3,229.76	\$3,637.40

Company	January		February		March	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway		\$40.43	\$10.58	\$47.64	\$1.00	\$39.66
Bullfrog-Goldfield Railroad	\$47.90	89.00	42.45	20.00	42.20	40.00
Eureka-Nevada Railroad	47.35	124.49		58.25		61.21
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	21.59	27.34	23.03	12.01	14.45	20.90
Nevada-California-Oregon Railroad	27.44	35.72	10.36	20.69	20.34	15.82
Nevada Central Railroad	38.37	112.18	24.73	30.78	45.72	49.82
Nevada Copper Belt Railroad	300.69	116.68	67.15	159.65	736.26	324.74
Nevada Northern Railroad	98.00	523.00	98.00	222.00	97.00	398.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	5.00	8.85	5.00	5.00	15.00	25.70
Southern Pacific Company*	2,262.59	2,290.06	1,792.18	2,063.78	2,133.49	2,012.60
Tonopah and Goldfield Railroad	337.70	323.34	696.99	359.20	648.64	290.23
Tonopah and Tidewater Railroad	21.00	21.00	21.00	21.00	21.66	19.15
Virginia and Truckee Railroad	138.81	82.63	96.96	45.38	82.59	96.87
Western Pacific Railroad	109.48	127.18	71.23	101.61	97.43	90.27
Totals	\$3,455.92	\$3,932.39	\$2,946.90	\$3,138.99	\$3,855.78	\$3,444.77

*Figures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.
Italic figures denote deficit.

MONTHLY REVENUE FROM INTRASTATE OPERATIONS, OTHER THAN TRANSPORTATION,
OF RAILROADS IN NEVADA

Company	April		May		June	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	\$17.39	\$36.95	\$21.21	\$40.23	\$28.60	\$46.14
Bullfrog-Goldfield Railway.....	26.33	15.00	17.97	15.26	28.91	15.00
Eureka-Nevada Railway.....		126.42		57.00		114.09
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	5.06	20.56	16.54	20.31	18.93	12.48
Nevada-California-Oregon Railway.....	30.86	26.09	21.60	6.45	17.85	11.52
Nevada Central Railroad.....	51.24	75.10	57.51	25.61	79.20	138.23
Nevada Copper Belt Railroad.....	137.93	373.00	134.44	159.82	61.09	251.44
Nevada Northern Railway.....	390.00	359.00	504.00	343.00	186.81	213.00
San Pedro, Los Angeles and Salt Lake Railroad.....						
Silver Peak Railroad.....	15.00	9.95	6.30	30.00	5.00	17.00
Southern Pacific Company ^a	1,503.81	2,910.58	1,620.30	3,424.05	2,778.82	3,185.59
Tonopah and Goldfield Railroad.....	517.13	254.34	92.73	330.98	161.97	147.67
Tonopah and Tidewater Railroad.....	21.00	22.00	22.00	22.00	45.25	24.67
Virginia and Truckee Railroad.....	152.80	91.08	102.78	98.16	18.65	18.79
Western Pacific Railroad.....	51.75	167.53	100.25	81.86	143.00	121.24
Totals.....	\$2,865.64	\$4,486.60	\$2,717.63	\$4,654.73	\$3,564.08	\$4,366.86
	Total for six months ending Dec. 31		Total for six months ending June 30		Total for year ending June 30	
Company	1911	1912	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway.....	\$188.53	\$141.89	\$126.68	\$251.05	\$315.21	\$392.94
Bullfrog-Goldfield Railway.....	229.77	141.07	150.55	194.26	330.32	335.33
Eureka-Nevada Railway.....		198.79		541.46		740.25
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	171.53	151.10	99.60	113.50	271.13	284.60
Nevada-California-Oregon Railway.....	247.41	157.86	123.45	116.29	375.86	274.15
Nevada Central Railroad.....	393.06	359.18	296.77	481.72	689.83	840.90
Nevada Copper Belt Railroad.....	1,801.11	554.76	1,417.56	1,385.33	3,213.67	1,940.09
Nevada Northern Railway.....	664.00	2,371.00	1,378.81	2,053.00	2,037.81	4,424.00
San Pedro, Los Angeles and Salt Lake Railroad.....						
Silver Peak Railroad.....	30.00	49.25	51.30	96.50	81.30	145.75
Southern Pacific Company ^a	13,843.19	14,660.82	12,090.43	15,906.55	25,933.62	30,587.37
Tonopah and Goldfield Railroad.....	1,650.21	1,543.91	2,354.16	1,631.76	4,004.37	3,175.67
Tonopah and Tidewater Railroad.....	144.93	132.66	151.91	128.82	296.84	261.48
Virginia and Truckee Railroad.....	543.11	543.39	591.59	435.91	1,134.70	860.30
Western Pacific Railroad.....	555.54	648.24	573.14	688.69	1,128.68	1,336.93
Totals.....	\$20,462.39	\$21,534.92	\$19,405.95	\$24,024.84	\$39,868.34	\$45,559.76

^a Figures shown for Southern Pacific Company include earnings of the Nevada and California Railway branch.*Italic figures denote deficit.*

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	July		August		September	
	1911	1912	1911	1912	1911	1912
Archibon, Topeka and Santa Fe Railway	\$44.09	\$53.21	\$107.70	\$59.34	\$71.79	\$60.12
Bullfrog-Goldfield Railroad	995.93	693.41	904.29	598.22		1,620.24
California Nevada Railway		6,594.11		5,282.59		6,135.71
Goldfield Consolidated M. & T. Co.		7,763.33		7,034.94		7,572.71
Las Vegas and Tonopah Railroad	7,666.78	3,596.76	8,016.37	3,680.23	7,018.48	3,490.04
Nevada-California-Oregon Railway	3,878.15	5,379.72	4,488.95	1,663.81	3,198.72	4,739.07
Nevada Central Railroad	1,951.12	1,891.45	2,139.92	1,466.91	6,157.14	1,777.01
Nevada Copper Belt Railroad	1,931.03	21,637.36	3,497.06	15,121.15	3,748.49	17,077.51
Nevada Northern Railroad	81,547.14	59,667.38	72,684.51	94,988.68	68,072.43	86,452.29
San Pedro, Los Angeles and Salt Lake Railroad	4,282.06	3,667.40	4,777.58	3,178.25	6,133.22	5,497.69
Silver Peak Railroad		521.41		581.27		3,494.73
Southern Pacific Company ^a		58,960.46		54,515.62		58,490.82
Tonopah and Goldfield Railroad	52,921.87	31,269.84	55,608.30	28,563.46	51,998.36	27,046.54
Tonopah and Tidewater Railroad	33,469.45	66.88	34,585.61	86.35	34,154.70	27,046.54
Virginia and Truckee Railroad	14,041.26	13,318.57	12,451.08	13,161.36	15,086.60	12,333.68
Western Pacific Railway	3,570.03	3,378.22	2,806.20	3,216.20	3,429.32	3,172.04
Totals	\$212,696.97	\$248,396.51	\$207,109.46	\$238,337.42	\$197,413.06	\$231,654.97

Company	October		November		December	
	1911	1912	1911	1912	1911	1912
Archibon, Topeka and Santa Fe Railway	\$112.86	\$55.97	\$47.14	\$65.45	\$70.85	\$108.82
Bullfrog-Goldfield Railroad	938.07	1,042.92	827.07	815.54	903.27	899.67
Eureka-Nevada Railway		5,594.37		6,115.19		3,878.79
Goldfield Consolidated M. & T. Co.		7,913.90		7,234.75		7,965.69
Las Vegas and Tonopah Railroad	8,051.86	3,633.64	7,502.19	3,284.86	7,531.47	3,245.48
Nevada-California-Oregon Railway	2,617.24	5,291.07	2,871.99	4,216.92	2,622.35	1,900.78
Nevada Central Railroad	5,197.02	1,638.36	4,395.61	1,444.66	2,989.66	18,969.78
Nevada Copper Belt Railroad	2,375.20	20,887.84	1,982.25	19,143.68	1,672.39	75,533.73
Nevada Northern Railroad	4,107.05	24,855.58	6,041.15	74,447.83	5,197.88	2,906.96
San Pedro, Los Angeles and Salt Lake Railroad	63,890.13	2,596.08	57,328.88	3,363.89	62,276.92	4,936.82
Silver Peak Railroad	2,021.58	2,596.08	2,082.92	497.61	1,948.36	59,563.73
Southern Pacific Company ^a	57,715.25	64,950.05	55,573.07	58,251.62	49,175.66	59,324.49
Tonopah and Goldfield Railroad	36,643.52	80,678.92	35,527.66	29,843.67	34,072.69	109.84
Tonopah and Tidewater Railroad	182.96	91.12	35,124.36	72.66	109.69	11,196.14
Virginia and Truckee Railroad	13,625.90	12,837.22	13,255.68	14,068.68	12,249.28	2,673.44
Western Pacific Railway	8,223.10	3,882.29	3,667.13	4,539.17	2,943.71	
Totals	\$206,201.08	\$186,694.62	\$191,701.96	\$227,316.18	\$183,746.71	\$225,166.60

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	January		February		March	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$90.98	\$93.51	\$53.62	\$90.74	\$44.03	\$83.43
Burlingame-Goldfield Railroad	742.10	672.59	623.31	583.34	574.59	597.90
Goldfield Consolidated M. & T. Co.	7,720.20	8,504.06	7,232.69	2,724.66	7,990.59	4,879.68
Las Vegas and Tonopah Railroad	2,024.03	6,714.83	2,044.60	6,543.05	2,482.66	7,215.27
Nevada-California-Oregon Railroad	1,940.05	8,836.96	2,435.89	3,866.21	3,471.20	8,879.23
Nevada Central Railroad	1,382.88	2,332.57	1,524.67	2,380.15	1,748.68	2,923.40
Nevada Copper Belt Railroad	11,184.64	20,521.04	15,004.97	15,789.71	18,485.83	19,200.15
Nevada Northern Railroad	72,763.92	80,183.84	68,413.11	83,040.54	81,196.65	95,043.13
San Pedro, Los Angeles and Salt Lake Railroad	2,019.28	2,171.63	2,152.57	2,153.64	2,071.02	2,771.68
Silver Peak Railroad	4,696.41	5,117.48	4,655.93	4,554.87	4,938.72	428.32
Southern Pacific Company ^a	43,679.17	55,259.82	47,143.20	60,612.82	57,633.46	60,344.82
Tonopah and Goldfield Railroad	32,380.49	27,301.31	33,044.96	27,189.00	35,398.68	28,728.57
Tonopah and Tidewater Railroad	82,97.15	82.62	81.29	94.06	71.40	88.79
Virginia and Truckee Railroad	10,811.09	9,844.55	9,999.03	9,854.58	11,854.26	14,398.16
Western Pacific Railroad	1,786.14	1,783.97	1,668.60	1,729.31	1,877.68	3,162.93
Totals	\$189,139.93	\$216,067.74	\$192,186.85	\$218,517.97	\$225,400.49	\$244,871.58
Company	April		May		June	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$66.37	\$80.05	\$54.59	\$83.27	\$369.42	\$482.76
Burlingame-Goldfield Railroad	704.56	621.32	850.37	776.49	760.82	559.67
Goldfield Consolidated M. & T. Co.	7,294.67	5,205.84	7,673.95	4,292.23	7,442.16	1,801.42
Las Vegas and Tonopah Railroad	3,069.63	6,589.86	3,148.34	7,158.43	3,841.88	7,466.61
Nevada-California-Oregon Railroad	4,208.62	3,870.07	4,945.01	4,673.79	5,305.30	8,049.15
Nevada Central Railroad	1,748.68	3,560.38	1,941.62	3,944.36	1,690.39	8,821.10
Nevada Copper Belt Railroad	18,512.92	18,051.03	17,373.08	20,225.16	21,267.07	2,065.34
Nevada Northern Railroad	84,122.89	84,334.31	88,698.77	98,775.96	87,846.72	18,510.77
San Pedro, Los Angeles and Salt Lake Railroad	2,063.64	3,476.26	2,854.34	2,380.15	2,859.82	88,498.96
Silver Peak Railroad	539.58	586.50	603.42	409.01	664.19	2,572.39
Southern Pacific Company ^a	55,314.82	66,802.41	64,781.29	59,377.37	59,579.83	67,714.70
Tonopah and Goldfield Railroad	33,061.83	28,024.72	33,357.75	29,570.67	31,829.06	82,063.90
Tonopah and Tidewater Railroad	84.17	94.17	82.40	134.07	181.62	77,894.93
Virginia and Truckee Railroad	10,794.91	12,060.58	11,262.91	11,699.08	11,332.16	11,504.32
Western Pacific Railroad	2,435.89	3,551.10	2,652.01	3,654.85	2,453.66	11,594.69
Totals	\$225,076.35	\$236,259.03	\$240,599.05	\$244,173.47	\$237,393.10	\$234,846.16

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	Total for six months ending Dec. 31		Total for six months ending June 30		Total for year ending June 30	
	1911	1912	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$454.43	\$402.91	\$638.81	\$853.76	\$1,143.24	\$1,256.67
Bullfrog-Goldfield Railroad	5,461.32	5,523.60	4,556.75	3,784.31	10,017.07	9,307.91
Eureka-Nevada Railway		33,501.12		22,397.89		55,899.01
Goldfield Consolidated M. & T. Co.	45,767.23	45,705.22	45,239.16	41,693.06	91,056.39	87,843.27
Las Vegas and Tonopah Railroad	19,669.06	21,864.47	16,911.14	23,176.41	36,690.20	45,039.88
Nevada-California-Oregon Railway	26,679.92	27,520.07	22,236.07	18,371.96	48,876.99	46,892.08
Nevada-Central Railroad	12,246.47	10,009.17	9,662.62	8,766.72	21,908.99	18,766.89
Nevada Copper Belt Railroad	25,814.35	113,810.22	101,833.66	112,297.87	127,647.91	226,108.19
Nevada Northern Railway	406,800.26	447,946.49	483,061.06	524,859.18	888,841.32	972,804.67
San Pedro, Los Angeles and Salt Lake Railroad	16,686.72	18,210.07	14,020.97	16,565.76	30,616.69	33,776.82
Silver Peak Railroad	3,630.26	3,296.53	3,253.25	3,170.88	6,793.51	6,467.71
Southern Pacific Company ^a	322,983.06	354,762.80	323,131.87	364,456.14	652,114.95	719,238.44
Tonopah and Goldfield Railroad	208,393.72	176,696.32	199,642.87	166,619.20	407,986.69	343,316.12
Tonopah and Tidewater Railroad	774.21	609.80	631.60	586.03	1,406.81	1,107.83
Virginia and Truckee Railway	80,669.73	76,556.55	66,064.36	69,461.59	146,714.09	146,317.24
Western Pacific Railway	24,069.49	20,861.36	12,873.38	18,821.21	36,912.87	39,582.99
Totals	\$1,198,769.25	\$1,357,465.30	\$1,909,796.37	\$1,394,527.95	\$2,508,555.62	\$2,751,993.25

^aFigures shown for Southern Pacific Company include earnings of Nevada and California Railway branch.

TOTAL NEVADA INTRASTATE BUSINESS FOR THE YEARS ENDING JUNE 30, 1912 AND 1913

Company	Freight revenue		Passenger revenue		Other transportation revenues	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$3,960.42	\$3,843.92	\$4.75	\$3,797.47	\$323.28	\$363.73
Bullfrog-Goldfield Railroad		87,843.27	4,193.80	13,774.56	1,433.03	1,331.21
Eureka-Nevada Railway	91,056.39	39,317.77				2,066.44
Goldfield Consolidated M. & T. Co.	11,110.16	17,966.53				4,620.20
Las Vegas and Tonopah Railroad	26,853.48	25,625.33			3,781.50	3,681.14
Nevada-California-Oregon Railway	5,949.47	3,471.28			4,773.82	
Nevada-Central Railroad	96,988.72	181,553.49				5,990.38
Nevada Copper Belt Railroad	893,780.19	863,795.76			2,063.90	15,665.94
Nevada Northern Railroad	8,976.86	9,812.80				3,154.45
San Pedro, Los Angeles and Salt Lake Railroad	1,533.83	1,627.13			1,053.01	1,027.54
Silver Peak Railroad	282,063.95	268,692.32			24,803.92	22,913.11
Southern Pacific Company	301,752.55	233,022.18			36,622.56	36,724.67
Tonopah and Goldfield Railroad	494.17	66,147.16			37,951.95	59.08
Tonopah and Tidewater Railroad	62,990.46	80,821.39			2,067.54	3,560.40
Virginia and Truckee Railway	16,775.41	15,115.24			649.60	879.26
Western Pacific Railway						
Totals	\$1,694,301.34	\$1,807,630.33	\$690,072.98	\$902,226.04	\$84,322.96	\$96,567.12
			Total intrastate revenues			
			1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway		\$315.21	\$392.94	\$1,143.24	\$1,256.67	
Bullfrog-Goldfield Railroad		390.32	335.33	10,017.07	9,307.91	
Eureka-Nevada Railway			740.25		55,899.01	
Goldfield Consolidated M. & T. Co.				91,056.39	87,843.27	
Las Vegas and Tonopah Railroad		271.13	294.60	36,580.20	45,089.88	
Nevada-California-Oregon Railway		376.86	274.15	48,876.99	45,892.08	
Nevada-Central Railroad		689.83	840.90	21,908.59	18,766.99	
Nevada Copper Belt Railroad		3,218.67	1,940.09	127,647.91	228,108.19	
Nevada Northern Railroad		2,037.81	4,424.00	888,841.32	972,904.67	
San Pedro, Los Angeles and Salt Lake Railroad				30,616.69	33,775.82	
Silver Peak Railroad		81.30	145.75	6,793.51	6,467.71	
Southern Pacific Company		25,933.62	30,667.37	662,114.95	719,208.44	
Tonopah and Goldfield Railroad		4,004.37	3,175.67	407,936.56	343,316.12	
Tonopah and Tidewater Railroad		296.84	261.45	1,405.81	1,107.83	
Virginia and Truckee Railway		1,134.70	860.30	146,714.09	146,317.24	
Western Pacific Railway		1,126.68	1,336.93	36,912.87	39,382.59	
Totals		\$39,868.34	\$45,559.76	\$2,508,565.62	\$2,751,993.25	

ANNUAL REPORTS
OF
Telegraph, Telephone, Express, Car Com-
panies and Electric Railways for
Years 1912 and 1913

CAPITAL STOCK

Company	Capital stock, common, par value outstanding		Capital stock, preferred, par value outstanding		Capital stock, total par value outstanding
	1912	1913	1912	1913	
American Express Company	\$3,000,700.00	\$3,000,700.00			\$18,000,000.00
Globe Express Company	23,987,400.00	23,987,400.00			3,000,700.00
Wells, Fargo & Company Express	44,696.00	44,696.00			23,987,400.00
Nevada Interurban Railway	1,000,000.00	1,000,000.00			44,696.00
Reno Traction Company					1,000,000.00
The Pullman Company					120,000,000.00
Bank of Austin ^a					
Bell Telephone Company of Nevada		316,300.00			316,300.00
Bridgeport Telephone and Telegraph Company					
California and Oregon Telegraph Company	36,700.00	36,700.00			36,700.00
Churchill County Telephone and Telegraph System					
Consolidated Power and Telephone Company	100,000.00	100,000.00			100,000.00
Elko County Telephone and Telegraph Company	46,280.00	49,280.00			49,280.00
Golconda Telephone and Power Company	25,430.00	33,980.00			33,980.00
Nevada Consolidated Telephone and Telegraph Company	250,000.00	250,000.00			250,000.00
Nevada Northern Railway Telephone Department					
Nevada Telephone-Telegraph and Telephone Company	177,166.67	177,166.67			177,166.67
Northern Nevada-Telegraph and Telephone Company	7,650.00	7,650.00			7,650.00
Postal Telegraph Cable Company	25,000.00	25,000.00			25,000.00
Pacific Telephone and Telegraph Company	18,000,000.00		\$32,000,000.00		50,000,000.00
Searchlight and Western Telephone Company	50,000.00	50,000.00			50,000.00
The United Farmers Telephone and Telegraph Company	10,000.00	10,000.00			10,000.00
Utah, Nevada and Idaho Telephone Company	223,550.00	223,550.00			223,550.00
Western Union Telegraph Company	99,817,100.00	99,817,100.00			99,817,100.00
White Pine Telephone Company	10,000.00				57,510.00
Yerington Electric Company	2,565.00		47,510.00	\$17,510.00	54,510.00
					2,565.00
Totals	\$146,763,236.67	\$128,885,861.67	\$32,047,510.00	\$47,510.00	\$178,810,746.67
					\$128,933,371.67

***The Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.**

Formerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.

FUNDED DEBT, AND CAPITAL STOCK

Company	Dividends declared		Funded debt outstanding		Interest accrued	
	1912	1913	1912	1913	1912	1913
American Express Company	\$2,119,800.00	\$2,117,700.00				
Globe Express Company	180,042.00	180,042.00				
Wells, Fargo & Company Express	2,396,740.00	2,396,740.00				
Nevada Interurban Railway						
Reno Traction Company			\$136,000.00	\$136,000.00	\$2,246.00	\$2,160.00
The Pullman Company	9,599,460.66	9,599,500.66				
Bank of Austin ^a						
Bell Telephone Company of Nevada ^b						
Bridgeport Telephone and Telegraph Company						
California and Oregon Telegraph Company						
Churchill County Telephone and Telegraph System						
Consolidated Power and Telephone Company			19,500.00		942.50	
Elko County Telephone and Telegraph Company	3,544.40	3,862.40				
Golconda Telephone and Power Company	1,883.20	2,040.00				
Nevada Consolidated Telephone and Telegraph Company		937.00				
Nevada Northern Railway Telephone Department						
Nevada Telephone-Telegraph Company		13,287.61				
Northern Nevada-Telegraph and Telephone Company	765.00					
Postal Telegraph Cable Company						
Pacific Telephone and Telegraph Company	1,805,750.00		42,080,000.00		1,718,625.00	
Searchlight and Western Telephone Company	800.00					
The United Farmers Telephone and Telegraph Company						
Utah, Nevada and Idaho Telephone Company	2,991,823.50	2,992,166.25	35,000.00		1,665.00	
Western Union Telegraph Company	3,800.80	3,800.80	32,602,000.00	32,602,000.00	1,864,341.34	1,580,100.00
White Pine Telephone Company			5,000.00	5,000.00	611.10	400.00
Yerington Electric Company						
Totals	\$18,604,409.56	\$17,310,076.62	\$74,877,500.00	\$32,745,000.00	\$3,578,329.94	\$1,622,660.00

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ASSETS, LIABILITIES AND COST OF PLANT, AND EQUIPMENT

Company	Total assets and liabilities		Cost of construction for year		Total cost of plant to date	
	1912	1913	1912	1913	1912	1913
American Express Company	\$60,120,078.95	\$61,550,905.30	\$1,495,931.76	\$895,781.78	\$11,895,695.67	\$12,791,487.45
Globe Express Company	3,692,610.02	3,622,517.49	2,173.11	1,994.95	89,327.63	91,224.59
Wells, Fargo & Company Express	88,108,698.82	38,964,260.26	599,459.43	1,294,181.60	5,782,049.59	7,026,254.19
Nevada Interurban Railway	88,108,698.82	87,727.68	5,013.21	8,737.08	82,949.21	86,698.26
Reno Traction Company	1,277,157.74	1,230,047.06	5,309.12	8,827.18	1,222,646.51	1,223,473.69
The Pullman Company	148,780,453.19	156,704,964.83		12,541,194.88	123,362,701.16	135,908,886.05
Bank of Austin ^a		12,623.83				
Bell Telephone Company of Nevada ^b		100.00	420.00	57,132.44	259,639.13	316,771.57
Bridgport Telephone and Telegraph Company	75.00					
California and Oregon Telegraph Company	1,257.14	\$,756.16				
Churchill County Telephone and Telegraph Company			6,923.01	400.00	6,923.01	36,745.06
Consolidated Power and Telephone Company	21,673.53	(c)		5,395.19	1,076.45	12,324.19
Elko County Telephone and Telegraph Company	3,699.99	3,300.00	7,519.88	5,670.02	52,519.88	58,069.90
Golconda Telephone and Power Company	4,255.15	20,144.83	1,840.17	27,879.45	32,894.21	60,590.54
Nevada Consolidated Telephone and Telegraph Company					5,444.42	
Nevada Northern Railway Telegraph Department						
Nevada Telephone Telegraph Company	18,393.10	19,129.26			217,960.99	191,446.98
Northern Nevada Telegraph and Telephone Company						
Postal Telegraph and Cable Company	19,929.27	16,311.26				
Pacific Telephone and Telegraph Company	15,873,855.00		17,739,430.00		72,905,977.00	10,000.00
Searchlight and Western Telephone Company	115.51	412.62			10,000.00	
The United Farmers Telephone and Telegraph Company						
Utah, Nevada and Idaho Telephone Company	4,353.64	9,316,026.29	10,926.01		175,349.82	
Western Union Telegraph Company	9,329,045.69	9,316,026.29	2,529,104.53	1,101,832.34	129,146,980.54	130,247,842.88
White Pine Telephone Company	1,193.89	1,705.80	1,592.02	859.48		
Yerington Electric Company	22,296.25	15,023.81				
Totals	\$277,145,779.88	\$270,868,353.53	\$17,940,389.89	\$15,996,804.16	\$346,139,174.22	\$288,058,005.66

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cSee electric and water utility reports of this company.*Italic figures denote reduction in cost.*

INCOME ACCOUNT

Company	Gross earnings from operation		Operating expenses		Net operating income or deficit	
	1912	1913	1912	1913	1912	1913
American Express Company ^a	\$43,714,874.32	\$47,849,009.67	\$42,002,853.06	\$46,916,893.84	\$1,712,021.26	\$832,069.83
Globe Express Company	773,218.77	820,911.63	758,130.76	786,725.78	16,088.02	34,186.86
Wells, Fargo & Company Express ^b	32,465,970.56	34,934,813.78	29,923,125.61	32,918,788.36	2,542,846.94	2,016,025.42
Nevada Interurban Railway	5,662.00	9,428.76	4,988.96	9,635.24	573.05	709.49
Reno Traction Company	51,172.08	57,878.06	38,469.68	42,327.17	12,712.40	15,550.88
The Pullman Company	37,090,413.49	40,032,742.29	27,189,829.41	27,676,350.75	9,900,584.08	12,367,391.64
Bank of Austin ^c		404.73		225.66		179.07
Bell Telephone Company of Nevada^c		81,023.93		71,684.82		9,344.11
Bridgeport Telephone and Telegraph Company	360.00	400.00	120.00	180.00	240.00	220.00
California and Oregon Telephone Company	10,602.24	12,852.17	7,536.92	9,624.02	3,065.32	3,228.16
Churchill County Telephone and Telegraph System	5,432.56	6,467.56	2,868.36	2,664.30	2,568.20	3,241.26
Consolidated Power and Telephone Company	1,712.56	2,277.04	1,303.09	1,332.13	409.46	1,094.91
Elko County Telephone and Telegraph Company	18,702.58	19,703.29	14,115.47	11,842.91	4,587.11	7,860.38
Goconda Telephone and Power Company	7,514.36	8,606.77	4,751.61	5,606.06	2,762.74	4,000.72
Nevada Consolidated Telephone and Telegraph Company	17,188.36		7,684.00		9,504.36	
Nevada Northern Railway Telegraph Department	7,461.64	10,290.49	14,691.86	15,135.14	7,230.02	4,854.65
Nevada Telephone Company	70,319.22	77,041.92	47,444.24	50,714.09	22,874.98	26,327.83
Northern Nevada Telephone Company	13,586.42		843.43		97.90	
Postal Telegraph Cable Company	1,180.84	27,373.88	18,569.79	19,112.01	4,722.87	8,261.87
Railroad Telephone and Telegraph Company	15,896.36		11,816,740.00		4,079,443.00	
Searchlight and Western Telephone Company		5,325.20	1,015.38		115.81	
The United Farmers Telephone and Telegraph Company	14,800.01		9,232.08		5,567.93	
Utah, Nevada and Idaho Telephone Company	41,661,439.48	46,368,993.26	32,639,239.70	37,670,993.82	9,092,900.78	8,715,710.44
Western Union Telephone Company	15,308.86	15,611.82	7,591.58	8,584.22	7,727.27	8,627.59
White Pine Telephone Company						
Yerington Electric Company	5,745.58	2,490.72	4,880.04	2,165.16	7,925.54	335.56
Totals	\$171,860,800.70	\$170,362,290.94	\$144,513,692.65	\$146,222,762.41	\$27,335,768.10	\$24,139,518.53

^a Operating expenses include amounts paid for express privileges.^b The Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^c Formerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.
Italic figures denote deficit.

INCOME ACCOUNT

Company	All other income		Taxes paid		Gross corporate income	
	1912	1913	1912	1913	1912	1913
American Express Company	\$1,536,157.64	\$1,396,817.72	\$371,606.09	\$360,192.36	\$2,876,572.81	\$1,968,695.19
Globe Express Company	163,312.02	162,927.78	8,913.97	12,250.00	160,481.07	154,863.63
Wells, Fargo & Company Express	1,270,481.57	1,400,610.85	366,764.21	357,201.96	3,453,562.10	3,089,434.32
Nevada Interurban Railway					573.05	109.49
Reno Traction Company			1,575.00	2,461.52	12,568.69	13,088.36
The Pullman Company	1,431.29		931,134.02	962,371.42	8,668,326.64	11,395,020.12
Bank of Austin ^a				1,535.25		\$9.00
Bell Telephone Company of Nevada		16.50			240.00	7,765.36
Bridgeport Telephone and Telegraph Company			266.15	405.62	2,909.17	2,964.13
California and Oregon Telephone Company		32.80			2,564.20	3,241.25
Churchill County Telephone and Telegraph System					409.46	1,094.91
Consolidated Power and Telegraph Company			300.58	436.12	4,236.53	11,424.26
Elko County Telephone and Telegraph Company		4,000.00	123.59	196.75	2,639.35	6,230.97
Golconda Telephone and Power Company		2,416.00			9,564.35	
Nevada Consolidated Telephone and Telegraph Company			599.45	599.45	7,889.47	5,451.10
Nevada Northern Railway Telegraph Department			1,413.74	c1,358.06	21,461.24	26,602.73
Northern Nevada Telegraph Company		274.90	40.82		56.98	
Postal Telegraph Cable Company	1,200,341.00		863.31	469.70	5,566.18	7,792.17
Searchlight and Western Telephone Company			544,005.00		4,735,779.00	
The United Farmers Telephone and Telegraph Company			246.43	85.00	22.56	327.62
Utah, Nevada and Idaho Telephone Company				82.69		231.96
Western Union Telegraph Company	1,326,367.67	1,087,449.54		1,020,000.00	5,411.50	8,733,159.98
White Pine Telephone Company			264.40	288.70	10,348,568.45	8,338.89
Yerington Electric Company					7,462.87	335.56
Totals	\$5,488,091.19	\$4,004,545.89	\$2,218,204.71	\$2,720,134.66	\$30,300,859.91	\$25,425,287.82

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cThis item has already been included in operating expenses.*Italic figures denote deficit.*

INCOME ACCOUNT

Company	Total deductions from gross corporate income		Net corporate income		Dividends paid	
	1912	1913	1912	1913	1912	1913
American Express Company	\$68,313.13	\$132,887.63	\$2,313,269.68	\$1,835,807.56		
Globe Express Company			160,431.07	184,863.63	\$180,042.00	\$180,042.00
Wells, Fargo & Company Express	11,877.79	14,007.92	3,441,674.31	3,045,496.40	2,396,740.00	2,396,740.00
Nevada Interurban Railway			578.06	109.49		
Reno Traction Company			8,028.47	8,714.04		
The Pullman Company	4,640.22	4,375.32	8,068,326.64	11,396,020.12	9,599,460.66	9,599,500.66
Bank of Austin ^a				39.00		
Bell Telephone Company of Nevada ^b		59.66		7,706.71		
Bridgeport Telephone and Telegraph Company			240.00	320.00		
California and Oregon Telegraph Company			243.53	2,573.70		
Churchill County Telephone and Telegraph System	2,524.64	380.43	2,564.20	3,241.25		
Consolidated Power and Telephone Company			409.46	1,094.91		
Elko County Telephone and Telegraph Company	8,060.92	6,168.17	5,764.39	5,256.09		
Golconda Telephone and Power Company	389.48	421.00	2,243.87	5,799.37	3,544.40	3,882.40
Nevada Consolidated Telephone and Telegraph Company			9,564.35		1,884.00	2,040.00
Nevada Northern Railway Telegraph Department			7,829.47	5,444.10		
Nevada Northern Telegraph Company			13,436.19	19,614.33		
Northern Nevada Telegraph and Telephone Company	9,438.79	6,988.40	56.98			13,287.51
Postal Telegraph Cable Company			6,266.18	7,349.61		
Pacific Telephone and Telegraph Company	3,086,658.00	442.56	1,699,121.00		1,305,760.00	
Searchlight and Western Telephone Company			22.66	327.62	800.00	
The United Farmers Telephone and Telegraph Company				231.96		
Utah, Nevada and Idaho Telephone Company			5,411.50			
Western Union Telegraph Company	5,066,014.19	5,606,880.20	5,263,654.26	3,126,279.78	2,991,823.50	2,992,166.25
White Pine Telephone Company	2,380.60	1,103.78	5,072.25	7,235.11	3,800.80	6,800.80
Yerington Electric Company	1,306.19		390.65	395.66		
Totals	\$3,225,503.96	\$5,773,715.06	\$22,066,783.68	\$19,651,572.76	\$16,468,845.36	\$15,194,493.62

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DIRECTORS AND OFFICERS OF EXPRESS, ELECTRIC-RAILWAY, CAR, AND TELEPHONE COMPANIES

American Express Company

Directors—James C. Fargo, New York, N. Y.; Francis F. Flagg, New York, N. Y.; Charles M. Pratt, New York, N. Y.; John H. Bradley, New York, N. Y.; Cornelius Vanderbilt, New York, N. Y.; J. Horace Harding, New York, N. Y.; J. G. Milburn, New York, N. Y.; J. S. Alexander, New York, N. Y.

Officers—President, James C. Fargo, New York, N. Y.; First Vice-President, Francis F. Flagg, New York, N. Y.; Secretary, William C. Fargo, New York, N. Y.; Vice-President and Treasurer, James F. Fargo, New York, N. Y.; General Counsel, Carter, Ledyard & Milburn, New York, N. Y.; Comptroller, William E. Powelson, New York, N. Y.; Vice-President and General Manager Eastern Department, Henry S. Julier, New York, N. Y.; Vice-President and General Manager Western Department, George C. Taylor, Chicago, Ill.; Manager of Foreign Department, United States and Canada, Marcellus F. Berry, New York, N. Y.; Director-General of Foreign Department, Europe, William S. Dalliba, Paris, France; Manager Department of Equipment and Supplies, Elisha Flagg, New York, N. Y.; Vice-President and General Traffic Manager, John H. Bradley, New York, N. Y.; Assistant General Traffic Manager, Edwin E. Bush, New York, N. Y.

The Globe Express Company

Directors—Geo. J. Gould, New York, N. Y.; E. T. Jeffery, New York, N. Y.; Chas. H. Schlacks, San Francisco, Cal.; J. F. Vaile, Denver, Colo.; Jesse White, New York, N. Y.; Jay Gould, New York, N. Y.; J. B. Andrews, Denver, Colo.

Officers—President, Chas. H. Schlacks, San Francisco, Cal.; Vice-President, E. T. Jeffery, New York, N. Y.; Secretary, J. B. Andrews, Denver, Colo.; Acting Treasurer, R. F. Watkins, Denver, Colo.; General Counsel, J. F. Vaile, Denver, Colo.; Auditor, L. O. Keller, Denver, Colo.; General Manager, D. D. Mayo, Denver, Colo.

Wells, Fargo & Company

Directors—B. D. Caldwell, F. D. Underwood, C. A. Peabody, H. W. de Forest, R. Delafield, P. M. Warburg, W. V. S. Thorne, W. Mahl, L. F. Loree, H. E. Huntington, all of New York, N. Y.; E. A. Stedman, Chicago, Ill.; William Sproule and W. F. Herrin, of San Francisco, Cal.

Officers—President, B. D. Caldwell, New York, N. Y.; Vice-President, A. Christeson, San Francisco, Cal.; Vice-President, E. A. Stedman, Chicago, Ill.; Secretary, C. H. Gardiner, New York, N. Y.; Treasurer, B. H. River, New York, N. Y.; General Counsel, C. W. Stockton, New York, N. Y.; Comptroller, J. W. Newlean, Chicago, Ill.; Assistant Comptroller, R. Burr, New York, N. Y.; General Manager, A. Christeson, San Francisco, Cal.; General Manager, E. A. Stedman, Chicago, Ill.; General Traffic Manager, F. S. Holbrook, New York, N. Y.; Traffic Manager, G. S. Lee, New York, N. Y.

Nevada Interurban Railway Company

Directors—L. W. Berrum, J. M. Short, Geo. W. Perkins, S. H. Rosenthal, C. H. Duborg, of Reno, Nevada.

Officers—President, L. W. Berrum; First Vice-President, J. M. Short; Secretary, S. H. Rosenthal; Treasurer, W. A. Harris; General Manager and General Superintendent, L. W. Berrum, all of Reno, Nevada.

Reno Traction Company

Directors—H. Fleishacker, Joseph Martin, John A. Buck, M. Fleishacker, William Matson, Wellington Gregg, Jr., all of San Francisco, Cal.; Alden Anderson, Sacramento, Cal.

Officers—Chairman of the Board and President, H. Fleishacker; First Vice-President, John A. Buck; Second Vice-President, R. E. Wallace; Secretary, Joseph Martin; Treasurer, M. Fleishacker; General Counsel, S. C. Scheeline; Auditor, A. N. Baldwin; General Manager, Geo. W. Hark, all of San Francisco, Cal.

The Pullman Company

Directors—Robert T. Lincoln, John J. Mitchell, Norman B. Ream, Chauncey Keep, William K. Vanderbilt, George F. Baker, Frederick W. Vanderbilt, John S. Runnells, W. Seward Webb, Frank. O. Lowden, J. P. Morgan. Addresses not shown.

Officers—Chairman of the Board, Robert T. Lincoln, Chicago, Ill.; President, John S. Runnells, Chicago, Ill.; Secretary, A. S. Weinsheimer, Chicago, Ill.; Treasurer, L. S. Taylor, Chicago, Ill.

Bank of Austin

(Owner and Operator of the Austin-Manhattan Telephone Company)

Officers—President, J. A. Miller, Austin, Nevada; Cashier, Henry B. Carter, Austin, Nevada.

Bell Telephone Company of Nevada

Directors—F. W. Eaton, San Francisco, Cal.; G. E. McFarland, San Francisco, Cal.; H. T. Scott, San Francisco, Cal.

Officers—President, G. E. McFarland; Vice-President, H. T. Scott; Secretary and Treasurer, F. W. Eaton; General Auditor, F. C. Phelps; General Manager, J. C. Nowell, all of San Francisco, Cal.

Bridgeport Telephone and Telegraph Company

Sole owner—A. S. Bryant, Bridgeport, Cal.

California and Oregon Telegraph Company

Directors—N. S. McKinsey, A. Siffard, J. Alexander, J. Grass, I. Knoch, all of Susanville, Cal.

Officers—President, Jules Alexander; Secretary, F. Brunhouse; Treasurer, Bank of Lassen County; Superintendent and Vice-President, N. S. McKinsey, all of Susanville, Cal.

Churchill County Telephone and Telegraph System

Officers—County Commissioners C. P. Cirac, A. C. Burton, Geo. Ernst; Manager, G. B. McFarlin.

Consolidated Power and Telephone Company

Directors—F. A. Clark, Ed. W. Clark, J. S. Park, W. S. Park, all of Las Vegas, Nevada.

Officers—President, F. A. Clark; Secretary and Treasurer, John S. Park; Manager, W. S. Park, all of Las Vegas, Nevada.

Elko County Telephone and Telegraph Company

Directors—W. T. Smith, A. W. Hesson, C. B. Henderson, C. H. Prentice, of Elko, Nevada; J. J. Hylton, Skelton, Nevada.

Officers—Not given.

Golconda Telephone and Power Company

Directors—Wm. Kent, Kentfield, Cal.; Jno. E. Webb, Kentfield, Cal.; John G. Taylor, Lovelock, Nevada; Harry Petrie, Golconda, Nevada; Stewart G. Mollin, Golconda, Nevada.

Officers—President, Jno. E. Webb, Kentfield, Cal.; Secretary and Treasurer, Stewart G. Mollin, Golconda, Nevada; Superintendent, C. B. Welshons, Winnemucca, Nevada.

Nevada Northern Railway Company Telegraph Line

Directors and Officers—See Nevada Northern Railway Annual Reports.

Nevada Telephone-Telegraph Company

Directors—Geo. Wingfield, Reno, Nevada; Eugene Howell, J. M. Gilfoyle, W. B. Williams, W. J. Douglass, F. G. Waterhouse, all of Tonopah, Nevada; W. L. Rennie, Sacramento, Cal.

Officers—President, Geo. Wingfield, Reno, Nevada; Vice-President, F. G. Waterhouse, Tonopah, Nevada; Treasurer, J. M. Gilfoyle, Tonopah, Nevada; Secretary, F. P. Oke, Tonopah, Nevada; General Manager, F. G. Waterhouse, Tonopah, Nevada.

Northern Nevada Telephone Company

Directors—John G. Taylor, Lovelock, Nevada; J. L. Winter, White Rock, Nevada; Philip Snyder, Auburn, Cal.; J. J. Allube, Berkeley, Cal.

Officers—Not shown.

Postal Telegraph Cable Company

Directors—Clarence H. Mackay, Edward Reynolds, Charles C. Adams, Charles B. Bruch, all of New York, N. Y.

Officers—President, Clarence H. Mackay; Vice-President and General Manager, Edward Reynolds; Second Vice-President, Charles C. Adams; Third Vice-President, Charles P. Bruch; Treasurer, Theodore L. Cuyler; Secretary, William B. Dunn, all of New York, N. Y.

Searchlight and Western Telephone Company

Directors—B. F. Miller, Jr., C. H. Jonas, James Cashman, F. R. McNamee, Frank Freeman. Addresses not given.

Officers—President, B. F. Miller, Jr.; Treasurer, James Cashman; Vice-President, C. H. Jonas, all of Searchlight, Nevada.

The United Farmers Telephone and Telegraph Company

Directors—E. Christensen, Gardnerville, Nevada; Fritz Schacht, Genoa, Nevada; J. H. Wood, Minden, Nevada; R. W. Bassman, Sheridan, Nevada; E. J. Phillips, Gardnerville, Nevada.

Officers—President, E. Christensen, Gardnerville, Nevada; Vice-President, Fritz Schacht, Genoa, Nevada; Treasurer, J. H. Wood, Minden, Nevada; Secretary and General Manager, E. J. Phillips, Gardnerville, Nevada.

Utah, Nevada and Idaho Telephone Company

Directors—J. F. Judge, H. H. Hempstead, H. L. Thomas, A. C. Ellis, Jr., of Salt Lake City, Utah; W. C. Baber, Sr., of McDermitt, Nevada; R. L. Douglass, of Fallon, Nevada.

Officers—President, J. F. Judge; Secretary and Treasurer, H. H. Hempstead; Superintendent, H. L. Thomas, all of Salt Lake City, Utah.

Western Union Telegraph Company

Directors—Oliver Ames, Boston, Mass.; Vincent Astor, New York, N. Y.; Union E. Bethell, New York, N. Y.; Henry A. Bishop, Bridgeport, Conn.; Newcomb Carlton, Robert C. Clowry, Henry P. Davison, Chauncey M. Depew, Harris C. Fahnestock, Robert M. Halloway, Edwin Gould, George J. Gould, Edward J. Hall, Henry S. Howe, Thomas H. Hubbard, Edward T. Jeffery, Charles Lanier, Lewis Cass Ledyard, Robert S. Lovett, all of New York, N. Y.; John J. Mitchell, Chicago, Ill.; William H. Moore, J. Morgan, Jacob H. Schiff, Joseph J. Slocum, James Stillman, Harry B. Thayer, Theo. N. Vail, Henry Walters, John L. Waterbury, all of New York, N. Y.; Robert Winsor, Boston, Mass.

Officers—President, Theo. N. Vail; Vice-Presidents, Newcomb Carlton, J. B. Van Every, Thos. F. Clark, G. W. E. Atkins, Belvidere Brooks; Secretary, Wm. H. Baker; Treasurer, A. R. Brewer; Comptroller, E. G. Gallaher; Auditor, H. W. Ladd; General Counsel, Rush Taggart; General Attorney, Geo. H. Fearons, all of New York, N. Y.; General Manager, Nevada, C. H. Gaunt, San Francisco, Cal.

White Pine Telephone Company

Directors—Chas. A. Walker, Arthur Smith, H. N. Byrne, all of Ely, Nevada.

Officers—President, Chas. A. Walker; Vice-President, Arthur Smith; Secretary and Treasurer, H. N. Byrne; Manager, J. S. Bennett, all of Ely, Nevada.

Yerington Electric Company

Directors—None.

Officers—President, J. I. Wilson; Treasurer, C. W. Gallagher; Secretary, E. R. Lam; General Manager, Geo. Plummer, all of Yerington, Nevada.

**ACCIDENT REPORT OF RAILROADS OPERATING IN NEVADA
FOR THE YEAR ENDING DECEMBER 31, 1913; REPORT
OF PASSES, FRANKS AND REDUCED RATE TRANS-
PORTATION ISSUED BY RAILROADS AND EXPRESS
COMPANIES IN NEVADA DURING THE YEAR 1913, AND
STATEMENT OF EXPENSES OF THE RAILROAD COMMIS-
SION OF NEVADA FOR THE YEAR 1913.**

**ACCIDENTS RESULTING IN THE DEATH OR INJURY OF PERSONS ON ALL RAILROADS OPERATING IN NEVADA
DURING THE YEAR 1913**

Nature of accident	Passengers		Trainmen		Switching crews		Other yardmen		Other employees		Trespassers		Total	
	K.	I.	K.	I.	K.	I.	K.	I.	K.	I.	K.	I.	K.	I.
Caught between cars.....	0	0	1	0	0	0	0	0	0	0	0	0	1	2
Cars coming together with jar.....	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Caught between train and structures.....	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Collisions.....	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Derailments.....	0	0	1	0	0	0	0	0	0	0	0	0	0	9
Explosions and burns.....	0	0	2	0	0	0	0	0	18	0	0	0	0	22
Falling from trains.....	0	0	10	0	1	0	0	0	14	0	3	0	7	31
Getting on or off standing trains.....	0	0	3	0	0	0	0	0	2	0	0	0	0	5
Handling traffic.....	0	2	0	0	0	0	0	0	30	0	0	0	0	31
Jumping on or off trains.....	0	0	1	0	0	0	0	0	6	0	0	0	0	19
Overhead structures.....	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Parking of cars.....	0	1	0	0	0	0	0	0	1	0	0	0	0	6
Shop work.....	0	0	0	0	0	0	0	0	151	0	0	0	1	151
Struck by trains.....	0	0	0	0	0	0	0	0	9	0	15	4	16	14
Sudden stopping of trains.....	0	2	0	0	0	0	0	0	0	0	0	0	0	12
Track work.....	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Coupling cars.....	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Cars turned over.....	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Other causes.....	0	6	0	0	0	0	0	0	35	0	0	0	0	67
Totals.....	0	21	2	47	0	12	0	4	5	296	25	13	33	398

K., killed. I., injured.

RECAPITULATION OF ANNUAL REPORTS OF RAILROADS FOR THE YEAR ENDING DECEMBER 31, 1913, CONCERNING
THE ISSUANCE OF PASSES, FRANKS, OR RATES LESS THAN THOSE OPEN TO THE GENERAL PUBLIC

Number of passes, franks, or special reduced rates issued by—

Item	Totals	Western Union	Western Pacific	Virginia and Truckee	Tonopah and Tide-water	Tonopah and Goldfield	Southern Pacific Co.	Silver Peak	San Pedro, Los Angeles and Salt Lake	Reno Traction Co.	Pullman Company	Nevada Northern	Nevada Interurban	Nevada Copper Belt	Nevada Central	Nevada-California-Oregon	Las Vegas and Tonopah	Eureka-Nevada	Bullfrog-Goldfield	Atchison, Topeka and Santa Fe
In exchange—																				
Annual passes	3,779	52	121	0	60	263	75	79	0	0	64	33	0	327	2	0	346	92	63	5
Time passes	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Trip passes	1,063	0	239	0	73	162	25	1	2	7	196	10	0	70	6	0	115	27	73	0
Special reduced rates	90	0	27	1	0	10	51	0	0	0	0	0	0	0	0	1	0	0	0	0
Totals	4,963	52	2,301	361	133	435	151	80	2	7	260	44	0	397	8	0	462	119	136	5
To employees—																				
Annual passes	1,137	0	490	48	5	183	191	5	40	0	0	39	0	69	1	0	38	21	6	1
Time passes	383	0	0	2	0	0	0	0	0	0	0	366	0	0	0	0	15	0	0	0
Trip passes	10,114	0	1,365	540	124	310	6,215	17	422	27	15	783	0	813	6	0	372	86	123	0
Special reduced rates	546	0	0	0	0	0	545	0	0	0	1	1	0	0	0	0	0	0	0	0
Totals	12,180	0	1,845	590	129	493	5,951	22	462	27	15	1,139	0	882	7	0	425	57	129	7
To United States officials, etc.—																				
Annual passes	7	0	0	0	0	0	4	0	0	0	0	0	0	2	0	0	1	0	0	0
Time passes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trip passes	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Special reduced rates	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	9	0	0	2	0	0	4	0	0	0	0	0	0	2	0	0	1	0	0	0

**GENERAL EXPENSES OF THE RAILROAD COMMISSION OF NEVADA
FOR THE YEAR 1913**

Rent.....	\$360.00
Stamps and postoffice box rent.....	133.19
Office stenographers.....	2,755.05
Outside stenographic fees.....	125.10
Fuel.....	138.10
Publishing railroad maps.....	36.00
Telegraph service.....	127.98
Telephone service.....	71.45
Express charges.....	44.27
Electric-light service.....	25.05
Furniture.....	458.18
Paper and envelopes.....	143.07
Other stationery.....	282.21
Drayage.....	3.75
Typewriter repairs and supplies.....	67.55
Janitor service.....	225.60
Books and periodicals.....	77.50
Traveling expenses.....	575.40
Water service.....	18.00
Typewriters.....	144.00
Dictaphone and supplies.....	260.40
Freight.....	12.56
Janitor supplies.....	20.90
Electric-light wiring and light supplies.....	72.40
Miscellaneous.....	30.50
Total.....	\$6,208.21

**LIST OF AUTHORITIES ISSUED BY THE RAILROAD COMMISSION OF
NEVADA GRANTING RAILROADS AND OTHER COMPANIES THE
PRIVILEGE OF REDUCING RATES ON LESS THAN THE STATU-
TORY NOTICE OF THIRTY DAYS. COMMENCING WITH JANUARY
1, 1913, AND ENDING DECEMBER 31, 1913.**

AUTHORIZATIONS

Authority No. 245—Virginia and Truckee Railway, applicant. Authority asked to establish rate of \$12.50 per single-deck car, 37 feet or less, inside measurement, on range cattle and sheep, moving from Reno to Minden, Nevada, for feeding or grazing purposes only. Application received January 21, 1913, granted on the same day.

Authority No. 246—Western Union Telegraph Company, applicant. Requesting authority to reduce rates for money transfer service between points in the State of Nevada, effective March 1, 1913. Application received February 1, 1913, granted February 7, 1913.

Authority No. 247—Postal Telegraph Cable Company, applicant. Requesting authority to reduce rates for money transfer service between points in the State of Nevada, effective March 1, 1913. Application received February 5, 1913, granted February 8, 1913.

Authority No. 248—Tonopah and Goldfield Railroad Company, applicant. Authority asked to amend tariff N. R. C. No. 37, covering ore in carload lots, so as to provide rates for the transportation of ore in less-than-carload lots between points named in the tariff. Application received February 14, 1913, granted the same day, to become effective on one day's notice to the Commission.

Authority No. 249—Nevada Northern Railway Company, applicant. Letter addressed by the Commission to the company under date of February 18, 1913, authorizing certain reductions in the rates applying on clay, carloads, cement blocks, carloads, coal, all kinds, carloads, and lumber and timbers, carloads, between McGill, Nevada, and various local points of the mines branch of the Nevada Northern Railway, effective March 3, 1913.

Authority No. 250—Virginia and Truckee Railway, applicant. Authority requested to name excursion fare of \$1.25 for the round trip, Reno to Carson City and return, to be made effective on less than twenty-four hours' notice. Application received February 6, 1913, granted the same day.

Authority No. 251—Western Union Telegraph Company, applicant. Authority asked to adjust certain rates for telegraph service between points in Nevada, by reducing the same. Application received March 7, 1913, granted the same day.

Authority No. 252—Virginia and Truckee Railway, applicant. Requesting permission to establish switching charge of 25 cents per ton on ore at Virginia City, Nevada, to apply from Gould and Curry mine dump to Butters tramway, minimum weight 50 tons. Application received March 29, 1913, granted the same day, to become effective on one day's notice to the Commission.

Authority No. 253—Bell Telephone Company of Nevada, applicant. Authority requested to open an exchange at Silver City, Nevada, and establish certain rates for service on less than thirty days' notice to the Commission. Application received April 12, 1913, granted April 30, 1913.

Authority No. 254—Bell Telephone Company of Nevada, applicant. Requesting authority to establish certain rates on order-receiving equip-

ment at all points in Nevada, effective on less than thirty days' notice to the Commission. Application received April 12, 1913, granted April 30, 1913.

Authority No. 255—Tonopah and Goldfield Railroad Company, applicant. Authority asked to name excursion fare of \$7.75 for the round trip, Mina to Goldfield and return, account Bankers' Convention. Application received May 6, 1913, granted May 6, 1913.

Authority Nos. 256, 257, and 258—Virginia and Truckee Railway, applicant. Requesting authority to name the following rates on less than thirty days' notice to the Commission:

Brick, carloads, minimum weight 30,000 pounds, Carson City to Mound House, Nevada, rate of 60 cents per ton. (Authority 256.)

Junk (including old rope), carloads, minimum weight 30,000 pounds, Reno to Mound House, Nevada, rate of \$1.50 per ton. (Authority 257.)

Plaster, carloads, minimum weight 30,000 pounds, Reno to Mound House, Nevada, rate of \$1 per ton. (Authority 258.)

Applications received May 6, 1913, granted the same day.

Authority No. 259—Western Pacific Railway Company, applicant. Requesting authority to name rate of \$66 per 36-foot double-deck car, on sheep, carloads, Gerlach to Deeth, Nevada. Application received May 7, 1913, granted the same day, to be made effective on one day's notice to the Commission.

Authority No. 260—Southern Pacific Company, applicant. Requesting authority to name joint rate of \$1.35 per ton in conjunction with the Virginia and Truckee Railway, to apply on brick, carloads, from Carson City to Wabuska, Nevada. Application received May 7, 1913, granted the same day, to be made effective May 7, 1913.

Authority No. 261—Southern Pacific Company, applicant. Authority asked to name joint rate of \$1.05 per cwt., in conjunction with the Tonopah and Goldfield Railroad Company, to apply on wagons in carload lots, from Goldfield to Winnemucca, Nevada, shipper to be given the privilege of partly unloading the shipment at Wabuska, Nevada. Application received May 7, 1913, granted the same day, to be made effective on one day's notice to the Commission, and to expire thirty days from effective date.

Authority No. 262—Virginia and Truckee Railway, applicant. Requesting authority to make effective May 15, 1913, and to remain in effect for a period exceeding thirty days, a round-trip passenger fare of \$1 for the round trip Reno to Bowers and return, tickets limited to date of sale. Application received May 12, 1913, granted the same day.

Authority No. 263—Postal Telegraph Cable Company, applicant. Requesting authority to make a general adjustment of telegraph rates between points in the State of Nevada, effective on less than thirty days' notice to the Commission. Application received April 25, 1913, granted, with certain exceptions, May 22, 1913.

Authority No. 264—Eureka-Nevada Railway, applicant. Requesting authority to publish new local freight tariff and make same effective on less than thirty days' notice to the Commission. Application received May 18, 1913, granted May 28, 1913, under the condition that new tariff contained no increases in rates.

Authority No. 265—Western Pacific Railway Company, applicant. Authority requested for permission to establish rate of \$50 per 36-foot-

6-inch car, on cattle, carloads, Gerlach to Carlin, Nevada. Application received May 21, 1913, granted the same day.

Authority No. 266—Bell Telephone Company of Nevada, applicant. Requesting authority to adopt a new schedule of toll rates for telephone service to apply between points in the State of Nevada, effective June 1, 1913. Application received May 6, 1913, granted May 22, 1913.

Authority No. 267—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to extend time limit on excursion tickets sold account celebration of Eagles at Goldfield, Nevada. Application received May 26, 1913, granted on same day.

Authority No. 268—Pacific Freight Tariff Bureau, applicant. Requesting authority to establish rates on hay and straw, carloads, from Fernley, Nevada, on the Southern Pacific Company, to points on the Tonopah and Goldfield Railroad, as follows:

To Redlich.....	36½ cents per cwt.
To Coaldale.....	39½ cents per cwt.
To Blair Junction.....	41½ cents per cwt.
To McLeans.....	41½ cents per cwt.
To Tonopah.....	50 cents per cwt.
To Goldfield.....	50 cents per cwt.

Application received May 29, 1914, granted May 30, 1913, rates to become effective on one day's notice to the Commission.

Authority No. 269—Bell Telephone Company of Nevada, applicant. Authority asked for permission to establish a rate of 25 cents per month in all exchanges of less than 1,000 stations for extra listing in the telephone directory. Application received May 29, 1913, granted June 3, 1913, rate to be made effective on less than one day's notice to the Commission.

Authority No. 270—Las Vegas and Tonopah Railroad Company, applicant. Requesting authority to publish round-trip fares between Goldfield, Bonnie Clare, Beatty, Rhyolite, and Carrara, also between Las Vegas and Indian Springs, on basis of one fare and one-half for round trip, the same to be made effective June 15, 1913. Application received June 3, 1913, granted June 5, 1913.

Authority No. 271—Pacific Freight Tariff Bureau, applicant. Authority asked to publish joint rate of 75 cents per cwt. on second-hand machinery, carloads, minimum weight 24,000 pounds, from Millers to Reno, Nevada, the Tonopah and Goldfield Railroad Company and Southern Pacific Company joining in the rates. Application received June 5, 1913, granted the same day, to be made effective on one day's notice to the Commission.

Authority No. 272—Tonopah and Tidewater Company, applicant. Requesting authority to establish, effective June 17, 1913, round-trip fares between all points in Nevada, on the basis of one fare and one-half for the round trip, return limit three days, sale dates every Tuesday and Saturday. Application received June 7, 1913, granted the same day.

Authority No. 273—Southern Pacific Company, applicant. Authority asked for permission to establish rate of 51½ cents per cwt. on machinery, carloads, from Reno to Lovelock, Nevada; and rate of 55 cents per cwt. on machinery, carloads, between Tecoma and Wabuska, Nevada, both rates to be made effective on one day's notice to the Commission. Application received June 10, 1913, granted the same day.

Authority No. 274—Eagle Salt Works Railroad Company, applicant. Requesting authority to publish and make effective on one day's notice, rate of $7\frac{1}{2}$ cents per cwt. on salt, carloads, minimum 30,000 pounds, and rate of 15 cents per cwt. on salt, less than carload, from Leete to Luva, Nevada. Application received June 14, 1913, granted the same day.

Authority No. 275—Las Vegas and Tonopah Railroad Company, applicant. Authority requested to issue Supplement to Passenger Issue No. 42, in order to amend the original tariff to read "Cancels Passenger Issue No. 40." Application received June 13, 1913, granted June 25, 1913, supplement to be made effective on one day's notice to the Commission.

Authority No. 276—Western Pacific Railway Company, applicant. Requesting authority to readjust Nevada intrastate class freight rates, effective July 1, 1913. Application received June 27, 1913, granted the same day, under condition that no increases in rates were made.

Authority No. 277—Golconda Telephone and Power Company, applicant. Requesting authority to reduce telephone rates for the transmission of telegrams from Winnemucca to points north. Application received June 27, 1913, granted June 30, 1913.

Authority No. 278—Southern Pacific Company, applicant. Requesting authority to establish, on one day's notice, switching charges of \$2.50 per car on less-than-carload freight applying only on shipments containing one or more pieces or packages weighing 5,000 pounds or more each, the rate to apply within the yard limits at all stations on the Southern Pacific Company in Nevada. Application received July 1, 1913, granted the same day.

Authority No. 279—Nevada Copper Belt Railroad Company, applicant. Authority asked to establish rate of $42\frac{1}{2}$ cents per ton, on lime rock, carloads, Ludwig to Thompson, Nevada, same to be made effective on one day's notice to the Commission. Application received July 3, 1913, granted the same day.

Authority No. 280—Western Pacific Railway Company, applicant. Requesting authority to publish and make effective on one day's notice, rate of \$30 per 36-foot double-deck car, on sheep, carloads, Jungo to Red House, Nevada. Application received July 5, 1913, granted the same day.

Authority No. 281—Southern Pacific Company, applicant. Requesting authority to publish and make effective on one day's notice certain rules relative to the transportation of perishable freight in less-than-carload lots, the same to apply to Reno and points east on the Southern Pacific Company's lines in Nevada. Application received July 9, 1913, granted July 10, 1913.

Authority No. 282—Southern Pacific Company, applicant. Authority asked to publish and make effective on one day's notice, rate of 25 cents per ton on coke, carloads, from Hazen to Wabuska, Nevada. Application received July 12, 1913, granted July 13, 1913.

Authority No. 283—Silver Peak Railroad Company, applicant. Requesting authority to publish and make effective, on one day's notice, rate of $7\frac{1}{2}$ cents per cwt. on freight, all classes, between Blair Junction and Wood Yard, Nevada, and 10 cents per cwt. between Blair and Wood Yard, Nevada. Also passenger fares of 75 cents between Blair Junction

and Wood Yard, Nevada, and \$1 between Blair and the same point. Application received July 15, 1913, granted July 17, 1913.

Authority No. 284—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to publish jointly with the Southern Pacific Company rate of 75 cents per cwt. on second-hand machinery, carloads, minimum weight 24,000 pounds, Goldfield to Reno, Nevada, the same to be made effective on one day's notice to the Commission. Application received July 17, 1913, granted the same day.

Authority No. 285—Southern Pacific Company, applicant. Authority requested to protect combination freight rates on traffic moving to and from Southern Pacific and Tonopah and Goldfield Railroad points via Mina, Nevada, whenever such combination rates make lower than the through rates named. Application received July, 17, 1913, granted the same day.

Authority No. 286—Virginia and Truckee Railway, applicant. Requesting authority to establish the following rates, to be made effective on one day's notice to the Commission:

Railway Equipment (except locomotives on own wheels), minimum carload weight 30,000 pounds, Reno to Carson City, Nevada, rate of \$2 per ton, carloads, and rate of \$2.50 per ton less than carloads, also to apply from Carson City to Reno, Nevada.

Locomotives (on own wheels), including services of a "pilot," Reno to Carson City, and Carson City to Reno, Nevada, rate of \$20 per locomotive.

The rates to apply on shipments moving to Carson City for repairs, and moving to Reno after having been repaired.

Application received July 26, 1913, granted July 28, 1913.

Authority No. 287—Wells, Fargo & Company Express, applicant. Requesting authority to publish and make effective July 30, 1913, rate of 30 cents per \$1,000 for the transfer of currency between Reno and Carson City, Nevada. Application received July 30, 1913, granted the same day.

Authority No. 288—Pacific Freight Tariff Bureau, applicant. Asking for authority to reduce through class-freight rates between Reno, Sparks, Vista, Hafed, Ditho, Clark, and Hazen on the Southern Pacific Company and points on the Tonopah and Goldfield Railroad. Same to be made effective on one day's notice to the Commission. Application received July 31, 1913, granted the same day.

Authority No. 289—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to extend the time limit for return trip on regular round-trip tickets sold Goldfield to Tonopah, Nevada, and return, and *vice versa*, from two days to ten days, the new provisions to be made effective September 8, 1913. Application received August 7, 1913, granted August 11, 1913.

Authority No. 290—Oregon Short Line Railroad Company, applicant. Authority requested to cancel through joint rate of \$1.43 per cwt. applying on beer in carload lots from Reno to East Ely and McGill, Nevada, in order that local combinations might apply making through rate of 95 cents per cwt. Application received August 17, 1913, granted August 18, 1913, cancelation to be made effective on one day's notice to the Commission.

Authority No. 291—Denied. Eureka-Nevada Railway, applicant. Requesting authority to increase class rates applicable to carload freight, from 70 per cent of the less-than-carload rates to 80 per cent of the same. Application received August 21, 1913, denied August 22, 1913.

Authority No. 292—Eureka-Nevada Railway, applicant. Requesting authority to name certain excursion fares between local points on the road. Company referred to the Commission's Tariff Circular No. 2-A, allowing the naming of excursion fares on less than statutory notice, making it unnecessary to apply for special permission to the Commission. Application received August 23, 1913, answered the same day.

Authority No. 293—Southern Pacific Company, applicant. Requesting authority to publish and make effective, on one day's notice, numerous reductions in ore rates, applying on carload lots, from Sutcliffe to Hazen and Wabuska, Nevada. Application received August 27, 1913, granted the same day.

Authority No. 294—Bell Telephone Company of Nevada, applicant. Authority requested to establish certain telephone toll rates to and from Mound House, Nevada, the same to be made effective on one day's notice to the Commission. Application received August 28, 1913, granted the same day.

Authority No. 295—Tonopah and Tidewater Company, applicant. Requesting authority to publish and make effective on two days' notice, rate of \$3 per ton on wheels, locomotive and car, mounted or unmounted, also driving-wheel tires, straight or mixed carloads, minimum weight 36,000 pounds, Beatty to Goldfield, Nevada. Application received September 10, 1913, granted the same day.

Authority No. 296—Southern Pacific Company, applicant. Requesting authority to publish and make effective immediately rate of \$3.75 per ton on lumber in carload lots, from Verdi to Mound House, Nevada, via Hazen and Churchill. Application received September 16, 1913, granted the same day.

Authority No. 297—The Pullman Company, applicant. Requesting authority to publish and make effective September 21, 1913, rates for Pullman car service on the Fernley-Lassen Branch of the Southern Pacific Company. Application received September 20, 1913, granted September 22, 1913, account being operation over new line.

Authority No. 298—Southern Pacific Company, applicant. Authority requested to publish and make effective, on one day's notice, rate of \$25 per 36-foot single-deck car, Fernley to Fallon, Nevada, and return. Application received September 23, 1913, granted the same day.

Authority No. 299—Bell Telephone Company of Nevada, applicant. Requesting authority to establish through joint telephone toll rates in conjunction with the Golconda Telephone and Power Company, via Winnemucca, Nevada, the same to be made effective on less than statutory notice. Application received October 3, 1913, granted October 4, 1913.

Authority No. 300—Tonopah and Tidewater Company, applicant. Authority asked to establish and make effective immediately, rate of \$40 per 36-foot car on mixed carloads of cattle and sheep, from Springdale to Goldfield, Nevada. Application received October 15, 1913, granted October 17, 1913.

Authority No. 301—Virginia and Truckee Railway, applicant. Requesting authority to publish and make effective on one day's notice, joint rate of \$1 per cwt. on beer in glass or in mixed lots with beer in wood, minimum weight 26,000 pounds, and rate of 95 cents per cwt. on beer in wood, minimum weight 20,000 pounds, both rates applying from Carson City to Tonopah and Goldfield, Nevada, the Southern Pacific Company and Tonopah and Goldfield Railroad Company joining in the rates. Application received October 25, 1913, granted the same day.

Authority No. 302—Virginia and Truckee Railway, applicant. Authority asked to establish, effective November 2, 1913, rate of \$2.50 per month for the transportation of milk, Carson City to Mound House, Nevada, the rate to cover movement of one can, not exceeding one gallon in capacity, daily by passenger train, also return of one empty can daily. Application received November 1, 1913, granted the same day.

Authority No. 302½—Eureka-Nevada Railway, applicant. Requesting authority to issue new local freight tariff on less than statutory notice. Application received October 25, 1913, granted October 27, 1913, provided no increases in rates were embodied in the tariff.

Authority No. 303—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to publish and make effective November 14, 1913, rate of \$1.50 per ton on ore, carloads, value not to exceed \$30 per ton, Goldfield to Millers, Nevada. Application received November 13, 1913, granted November 14, 1913.

Authority No. 304—Tonopah and Goldfield Railroad Company, applicant. Authority requested to establish, on one day's notice to the Commission, rate of \$4.60 per ton on potatoes, carloads, minimum weight 24,000 pounds, from Coaldale to Goldfield, Nevada. Application received November 16, 1913, granted November 17, 1913.

Authority No. 305—Eureka-Nevada Railway, applicant. Requesting authority to publish and make effective, on one day's notice, rate of \$1.50 per ton on potatoes in carload and less-than-carload lots, Eureka to Palisade, Nevada. Application received November 21, 1913, granted the same day.

Authority No. 306—Bell Telephone Company of Nevada, applicant. Authority requested to publish and make effective immediately joint long-distance telephone toll rates with the Mason Valley Telephone and Telegraph Company via its Dayton exchange. Application received November 23, 1913, granted November 26, 1913.

Authority No. 306½—Southern Pacific Company, applicant. Requesting authority to publish and make effective, on one day's notice, joint rates in conjunction with the Nevada Copper Belt Railroad Company, as follows:

Grain in carload lots, from Nordyke and Mason to Sutcliffe and Flanigan, Nevada, rate of \$4.25 per ton.

Hay, baled, in carload lots, from Nordyke and Mason to Sutcliffe and Flanigan, Nevada, rate of \$4 per ton.

Application received December 10, 1913, granted the same day.

Authority No. 307—Virginia and Truckee Railway, applicant. Requesting authority to publish and make effective December 12, 1913, rate of \$1 per ton on refuse potatoes (hog feed), carloads, minimum weight 40,000 pounds, from Lakeview to Reno, Nevada. Application received December 11, 1913, granted the same day.

Authority No. 307½—Bell Telephone Company of Nevada, applicant. Authority asked to publish and make effective immediately a supplementary rate schedule covering miscellaneous equipment and reducing rate for head receiver from 50 cents to 25 cents per month, to apply at all exchanges in Nevada. Application received November 23, 1913, granted November 26, 1913.

Authority No. 308—Southern Pacific Company, applicant. Requesting authority to publish and make effective, on one day's notice, the following rule, to be made applicable to Nevada intrastate freight traffic:

INTRASTATE TRAFFIC: Rates between points on the main line and points on the branch lines south of Hazen, Nevada, will, in the absence of specific rate from points of origin to destination, be made by adding the rates in this tariff to and from Hazen, Nevada, but if the rate so made exceeds the rate to or from a point beyond on the same direct line or route as shown in this tariff, the latter rate will apply.

Application received December 12, 1913, granted December 15, 1913.

Authority No. 309—Nevada Copper Belt Railroad Company, applicant. Requesting that telegraphic notice forwarded be considered the same as filing of tariff to cover excursions rate Mason to Thompson and return, regular tariff to be filed later. Application received December 15, 1913, granted the same day.

Authority No. 310—Pacific Freight Tariff Bureau, applicant. Requesting authority to publish and make effective on less than statutory notice, the following joint rule to apply on Nevada intrastate freight traffic interchanged between carriers party to Pacific Freight Tariff Bureau's Joint Freight Tariff 7-B:

Whenever a class rate and a commodity rate are named between specified points, the lower of such rates is the lawful rate unless some combination of class rates or of commodity rates or of class and commodity rates makes a lower through rate.

Application received December 16, 1913, granted the same day.

Authority No. 311—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to name round-trip excursion fares of one fare and one-third for the round trip between all local points, to be made effective December 20, 1913, and later dates, return limit January 5, 1914. Application received December 17, 1913, granted the same day.

Authority No. 312—Southern Pacific Company, applicant. Authority requested to publish and make effective on one day's notice rate of \$2.90 per ton on grain, carloads, Wabuska to Flanigan, Nevada, and rate of \$2.75 per ton on hay, carloads, from and to the same points. Application received December 18, 1913, granted the same day.

Authority No. 313—Southern Pacific Company, applicant. Requesting authority to extend effective date of Rule 11-A, published on corrected page 8, Southern Pacific Company's Tariff 90-A, to February 1, 1914. The rule established certain increases in minimum charges for less-than-carload freight. Application received December 19, 1913, granted the same day.

Authority No. 314—Nevada Copper Belt Railroad Company, applicant. Requesting authority to apply immediately rate of \$17.50 for every two cars, single deck, of sheep forwarded from Hudson to Wabuska, Nevada.

Application received December 20, 1913, granted December 22, 1913, for the reason that company had established rate of \$17.50 to apply on sheep, moving in double-deck cars, Hudson to Wabuska, and was unable to furnish double-deck equipment on demand of shippers. At company convenience, single-deck cars were furnished, and shippers were entitled to the double-deck car rate.

**ADMINISTRATIVE, TARIFF, ACCOUNTING AND GENERAL
RULINGS OF THE RAILROAD COMMISSION OF NEVADA,
RAILROAD COMMISSION LAW, RULES OF PRACTICE, AND
FORMS.**

ADMINISTRATIVE RULINGS

January 27, 1913—Telegram received from F. Sykes, President of the Eureka-Nevada Railway, asking for list of officers of Nevada Transportation Company authorized to issue and request passes on behalf of the Eureka-Nevada Railway.

Mr. Sykes was advised that the proper officers of an operating railroad to request and issue free transportation were the President, Vice-President, or General Manager.

June 28, 1913—Inquiry from E. L. Bingham, Supervisor of the Nevada Hospital for Mental Diseases, relative to the legality of common carriers issuing free transportation to attendants traveling having charge of indigent insane persons.

Held, That such free transportation could not be legally issued by railroads operating in the State of Nevada, or received by such attendants.

August 5, 1913—Inquiry from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, relative to the legality of issuing railroad transportation in exchange for advertising, and asking that a certain form, to be signed by officials of the company and various newspapers, be approved.

Held, That such transportation could be legally issued, provided commercial rates were assessed, and the form was approved.

November 24, 1913—Inquiry from Prof. J. E. Stubbs, President of the University, as to the legality of railroads issuing free transportation to teachers and professors traveling on business under the Pure Food and Drugs Act and the Weights and Measures Act.

Held, That such transportation could be legally issued.

ACCOUNTING CIRCULAR NO. 1

There being numerous complaints made to this Commission, informally, by various shippers and consignees in the State of Nevada, respecting the rendering of freight bills, by several railroads operating in the State of Nevada, the freight bills referred to showing, in some instances, the point of origin of shipment, destination, character of goods, weight and charges, but eliminating the rates upon which charges are assessed; and in other instances showing advanced charges and eliminating advanced charged rates, thus making it impossible for the average consignee to check his freight bills with any degree of accuracy, this Commission, after careful investigation of the matter, has deemed it advisable to make the following ruling to govern all railroads operating in the State of Nevada. It is, therefore,

Ordered: That all railroads operating in the State of Nevada, when rendering freight bills to consignees at the point of delivery of shipments, must show the rate assessed from point of origin to point of destination.

In all cases where freight bills carry advance charges, the rate or rates used in assessing the advanced charges must be

shown, and also the rate or rates used in assessing the line charges, thus specifically naming the through rate.

This order is to take effect on September 1, 1909.

By order of the Commission:

E. H. WALKER, *Secretary*.

TARIFF RULING NO. 1

Carriers may provide in their tariffs that limited passenger tickets may be extended in cases of the illness of the passenger holding such ticket.

Tariffs must give the title of the officer who shall have authority to give such extension, and such officer shall be required by the carrier to keep a memorandum of each instance in which such extension is given, and the date upon which it is allowed. Such information shall be subject at any time to be called for by the Commission. This rule must be applied strictly and in good faith, and upon the carrier is placed the responsibility of strict conformity thereto.

Only such illness as makes travel dangerous to health of the traveler will justify the extension herein provided for. The extension may also be granted to one or more members of the family of the passenger who is ill when traveling together and to persons who are subject to an established quarantine.

Stopover privileges for a limited time may be granted for the same causes and under the same conditions and restrictions as justify extension of time upon limited tickets. No stopover privilege will be recognized as valid unless provisions therefor are made in the carrier's published tariffs.

RAILROAD COMMISSION OF NEVADA,

ATTEST: E. H. WALKER, *Secretary*.

H. F. BARTINE, *Chairman*.

Effective February 10, 1908.

TARIFF CIRCULAR NO. 2A

To the Railroads Operating in Nevada:

Strictly excursion fares, covering a named and limited period, may be established on less than the regular thirty-day notice.

To avoid the necessity of special application in cases of this kind, the Commission has made a general order fixing the following-named time of notice of round-trip excursion fares, and carriers may govern themselves accordingly:

Fares for an excursion limited to a designated period of not more than three days may be established, without further notice, upon posting a tariff two days in advance in two public and conspicuous places in the waiting-room of each station where tickets for such excursions are sold, and mailing a copy thereof to the Commission.

Fares for an excursion limited to a designated period of more than three days and not more than thirty days may be established upon a like notice of five days.

Fares for a series of daily excursions, such series covering a period not exceeding thirty days, may be established upon a like notice of five days as to the entire series, and a separate notice of the excursion on each day covered by the series need not be given.

Fares for an excursion limited to a designated period exceeding thirty days will require the statutory notice, unless shorter time is allowed in special cases by the Commission.

RAILROAD COMMISSION OF NEVADA,

Issued June 19, 1908.

By E. H. WALKER, *Secretary*.

Effective June 19, 1908.

Tariff Circular No. 2 canceled.

TARIFF CIRCULAR NO. 3

To the Railroads Operating in the State of Nevada:

Commencing immediately, all passenger and freight tariffs, circulars, excursion notices or rate notices of any kind, and all supplements, or amendments to the same naming rates or fares affecting the intrastate business of your road within the State of Nevada, must be given a Nevada Railroad Commission number.

The first tariff issued after the receipt of this circular letter containing rates described above should be numbered one, and all tariffs issued thereafter to be numbered consecutively. The number must be preceded by the initials N. R. C., and the initials and number must be placed in either the upper right-hand corner of the tariff or the upper left-hand corner, and should be printed in bold type.

Where one issue supersedes another, reference of cancelation must be made beneath the N. R. C. number of the superseding tariff, showing the number of the tariff canceled. Where portions of other N. R. C. tariffs are canceled reference to the tariff or tariffs and rates canceled must be specified on the first page or title page of the canceling tariff, showing in detail just what items have been canceled.

Please acknowledge receipt of this circular letter by return mail, advising this Commission of your compliance to the same and also advising whether the matter is thoroughly understood.

RAILROAD COMMISSION OF NEVADA,

Issued May 26, 1909.

By E. H. WALKER, *Secretary*.

TARIFF RULING NO. 4

Upon traffic picked up and laid down within the State of Nevada, by carrier or between carriers, line or interline, the through rate must not exceed the combination of local rates based upon terminal, junction or main-line points.

Wherever it is found that the through rate to any given point does exceed the combination of local rates, the combination of locals must be protected by and through a request made of this Commission for permission to amend the through or local tariff, as the case may be, so as not to exceed the lower combination rates, making such amendment retroactive in effect to the date upon which the excessive through rate was named; provided, that no rate of this character shall be made retroactive in effect prior to the date this ruling becomes effective, in any case where such through tariff carries the provision that through rates named must be applied regardless of what lower combinations may be made. All tariffs carrying a provision of this kind must be immediately amended, striking out such provision as applies to Nevada intrastate traffic, effective the same date as this ruling.

Further, it is hereby ordered that in no case shall a rate be charged on any commodity exceeding the class rate applicable on such commodity. That is, wherever the application of the current Western Classification or Exceptions thereto and the class rate named makes a lower rate than the commodity rate named, the class rate must be applied; and wherever the commodity rate makes the lowest rate, it must be applied.

This ruling shall take effect May 1, 1910.

By order of the Commission:

Issued April 7, 1910.

E. H. WALKER, *Secretary*.

GENERAL RULING No. 1

In re the matter of switching low-grade commodities reaching Goldfield over the lines of the Tonopah and Goldfield Railroad:

Several informal complaints have been made to the Commission at various times by J. Gottstein and others, alleging error in weights of carload shipments of hay which were not weighed in transit and that charges were assessed on the basis of invoice weights.

Invoice weights should not be applied except in cases where it is impossible to secure track-scale weights.

The Tonopah and Goldfield Railroad maintain track scales at Main Line Junction, and at Goldfield, when necessary, use the track scales belonging to the Western Ore Purchasing Company. The said railroad company in reply to the aforesaid complaints have advised the Commission that they are agreeable to the application of either track-scale or invoice weights and have requested that a ruling be made in order that the question may be definitely settled.

On the other hand, Mr. Gottstein, in behalf of himself and other shippers, demands that they be accorded a free weighing service at Goldfield covering carload shipments of low-grade commodities when, in their judgment, said shipments appear to be short of weights.

We do not believe that this position is well taken and feel that if the shipments are weighed in transit at Main Line Junction, a point thirty-five miles north of Goldfield, and the waybill weights and charges corrected to the actual weight determined at that point, such service should, in every way, be satisfactory. If, however, on arrival at Goldfield there is further contention regarding the correctness of the weights a reciprocal rule may be adopted. For example, if the variation in weight does not exceed 2,000 pounds in the reweighing at Goldfield, consignee shall be entitled to the benefit of the corrected weight, but shall pay to the carrier for the weighing service a charge not exceeding \$2.50 per car.

If, however, in reweighing there is a difference exceeding 2,000 pounds in favor of consignee, he shall have the benefit of the corrected weight and shall not be required to pay carrier for the service incidental to reweighing.

The complainant also insists that, where weights of carload shipments are challenged, the cars, after being made empty, should be weighed in order to secure correct weights of the same. Empty cars are weighed periodically by the companies that own them, and the weight is stenciled on each car. If the dealer has reason to believe the weight of the car, as marked on it, is incorrect, then he should have the

right to have it weighed, but unless it is more than 500 pounds heavier than the tare indicates, he should pay the railway company for switching and weighing an allowance not exceeding \$2.50 per car.

It is therefore ruled that all carload shipments of hay, lumber, coal, brick, cement and other low-grade commodities destined to Goldfield shall be reweighed at Main Line Junction on and after January 20, 1911, and waybill weights and charges accordingly corrected to conform to the actual scale weights.

RAILROAD COMMISSION OF NEVADA,

Dated December 30, 1910.

By E. H. WALKER, *Secretary*.

TARIFF RULING No. 5

To Railroads Operating in Nevada:

It is hereby ordered that all rates established on live stock or any other commodity, between points in the State of Nevada, requiring shippers to forward a trainload of a specified number of cars in order to enjoy the rate named, shall be so amended as to eliminate the trainload minimums and leave the rates in effect on single carload shipments.

This order shall take effect on August 1, 1911, and the rates above referred to must be amended as ordered on or before that date.

RAILROAD COMMISSION OF NEVADA,

Dated December 20, 1911.

By E. H. WALKER, *Secretary*.

THE RAILROAD COMMISSION LAW

An act to regulate railroads, telegraph and telephone companies and other common carriers in this State, creating a Railroad Commission, constituting the Governor, the Lieutenant-Governor, and the Attorney-General a Railroad Board for the appointment and the removal of the Railroad Commissioners, prevent the imposition of unreasonable rates, prevent unjust discrimination, insure an adequate railway service, and fixing maximum freight charges.

[Approved March 5, 1907, and amended March 20, 1909, and March 27, 1911]

Railroad Commission Created—Railroad Board—Terms of Office.

SECTION 1. A railroad commission is hereby created, to be composed of three commissioners. The governor, the lieutenant-governor, and the attorney-general shall constitute a railroad board for the purpose of appointing such commissioners. A majority of the members of said railroad board may perform all the duties required of such board. Within thirty days after the passage of this act the railroad board shall appoint such commissioners and designate the term of each, and they shall hold until their successors are appointed. The term of one such appointee shall terminate on the first Monday in February, 1909; the term of the second such appointee shall terminate on the first Monday in February, 1910; and the term of the third such appointee shall terminate on the first Monday in February, 1911. On the second Monday in January, 1909, and annually thereafter, there shall be appointed, in the same manner, one commissioner for the term of three years from the first Monday in February of such year. Each commissioner so appointed shall hold office until his successor is appointed and qualified. Any vacancy shall be filled by appointment by the railroad board.

Qualifications.

(a) One commissioner, who shall be designated as chief commissioner and shall be chairman of the commission, shall be an attorney at law, and well versed in the law of railroad regulation; one to be designated as first associate commissioner shall be a practical railroad man familiar with the operation of railroads generally; the third, to be designated as the second associate commissioner, shall be a business man having a general knowledge of fares and freights, tolls and charges, as levied by the railroads, and all common carriers included within the term "railroad" as defined in this act. Each commissioner, as herein designated, shall have an equal voice and vote upon all questions whereon the commission is required to or may act as a body. A majority of said commission shall have full power to act in all matters within its jurisdiction, and in the event of two of the commissioners being disabled or disqualified from acting, or in the event of there being two vacancies at the same time in the commission, the remaining commissioner shall have power to do all the acts and things which a majority of the com-

mission might do, and his official acts shall stand as the acts of the commission. At no time shall more than two of said commissioners be members of the same political party.

May Be Removed by Railroad Board.

(b) The railroad board may at any time remove any commissioner for any inefficiency, neglect of duty, or malfeasance in office. Before such removal it shall give such commissioner a copy of the charges made against him and shall fix a time when he can be heard in his own defense, which shall not be less than ten days thereafter, and said hearing shall be open to the public. If he shall be removed the railroad board shall file in the office of the secretary of state a complete statement of all charges made against such commissioner and findings thereon, with the record of the proceedings.

Commissioners Must Have No Pecuniary Railroad Interests.

(c) No person so appointed shall be pecuniarily interested in any railroad in this state or elsewhere, and if any such commissioner shall voluntarily become so interested, his office shall *ipso facto* become vacant; and if he shall become so interested otherwise than voluntarily, he shall, within a reasonable time, divest himself of such interest, and failing to do so his office shall become vacant and the railroad board shall proceed as provided for in section 1, subdivision b, of this act.

Must Investigate All Complaints.

(d) Whenever a complaint is made to the commission of a violation of any of the provisions of this act, or of any order of the commission, it shall, within four months, commence investigation of said charge, and shall determine the same within six months, unless the person preferring said charges shall agree in writing to a longer time. A failure to comply with this provision shall *ipso facto* render the office of each of the commissioners vacant, and the railroad board shall appoint new commissioners as provided for by this act.

Chief and First Associate Commissioners Shall Devote Entire Time.

(e) Neither the chief commissioner nor the first associate commissioner shall hold any other office or position of profit, or pursue any other regular business or vocation. These limitations and restrictions shall not apply to the second associate commissioner, but none of the commissioners shall be a member of any political convention, or a member of any committee of any political party.

Each Commissioner Shall Take Oath.

(f) Before entering upon the duties of his office, each of said commissioners shall take and subscribe the constitutional oath of office, and shall in addition thereto swear (or affirm) that he is not pecuniarily interested in any railroad in this state or elsewhere, or common carrier, which oath or affirmation shall be filed in the office of the secretary of state.

Salaries.

(g) The chief commissioner shall receive a salary of \$5,000 per annum, the first associate commissioner shall receive a salary of \$4,000 per annum, and the second associate commissioner shall receive a salary of \$2,500 per annum, all payable in the same manner as the salaries of other state officers are paid.

Secretary.

(h) Said commission may appoint a secretary, who shall be an expert rate man, at a salary of not more than \$2,400 per annum, and may employ such other clerks and experts as may be necessary to perform any service it may require of them, and shall fix their compensation.

Oath of Secretary.

(i) The secretary shall take and subscribe to an oath similar to that of the commissioners, and shall keep full and correct records of all transactions and proceedings of the commission, and shall perform such other duties as may be required by the commission. Any person ineligible to the office of commissioner shall be ineligible to the office of secretary.

"Railroad Commission of Nevada"—Seal.

(j) The commission shall be known collectively as the "Railroad Commission of Nevada," and in that name may sue and be sued. It shall have a seal with the words "Railroad Commission of Nevada," and such other design as the commission may prescribe engraved thereon, by which it shall authenticate its proceedings, and of which the courts shall take judicial notice.

Office at Capitol—Expenses.

(k) The commission shall keep its office at Carson City, and shall be provided by the board of capitol commissioners with suitable room or rooms, necessary office furniture, supplies, stationery, books, periodicals, maps, and all necessary expenses shall be audited and paid as other state expenses are audited and paid. The commission may hold sessions at any place other than its office, when the convenience of the parties so requires. The commissioners and secretary and such other clerks and experts as may be employed shall be entitled to receive from the state their necessary expenses while traveling on the business of the commission, including the cost of lodging and subsistence. Such expenditures shall be sworn to by the person who incurred the expense, and be approved by the chairman of the commission.

Rules.

(l) The commission shall have the power to adopt and publish rules to govern its proceedings, and to regulate the mode and manner of all investigations and hearings of railroads and other parties before it, and all hearings shall be open to the public.

Railroad Matters.

(m) The commission may confer by correspondence, or by attending conventions, or otherwise, with the railroad commissioners of other states, and with the Interstate Commerce Commission on any matters relating to railroads. All necessary expenses incurred in attending such conventions shall be a charge against the state, and be audited and paid as other state claims are paid; *provided*, that all such claims shall be sworn to by the commissioner incurring the expense, and be approved by the chairman.

Organization.

(n) Nothing herein contained shall be so construed as to affect the date of the beginning or ending of the term of any commissioner now in office, or to change the dates of future appointments from those now

prescribed by law, but from and after the passage of this amendatory act the commissioner now designated as the one who shall not hold any other office or position of profit, or pursue any other business or vocation, or serve on or under any committee of any party, but shall devote his entire time to the duties of his office, shall be officially designated "Chief Commissioner," and be paid the salary herein prescribed, and the commissioner whose term began on the first Monday in February, 1911, shall be officially designated "First Associate Commissioner," and the salary paid him as herein prescribed. The salaries herein provided for shall be deemed and considered full compensation for all services rendered by the members of the commission, whether as railroad commissioners or in any other official or ex officio capacity. *As amended March 20, 1909, and March 27, 1911.*

"Railroad" Defined.

SEC. 2. The term "railroad," as used herein, shall mean and embrace all corporations, companies, individuals, associations of individuals, their lessees, trustees or receivers (appointed by any court whatsoever) that now, or may hereafter, own, operate, manage, or control any railroad or part of a railroad as a common carrier in this state, or cars, or other equipment used thereon, or bridges, terminals, or sidetracks, or any docks or wharves or storage elevators used in connection therewith, whether owned by such railroads or otherwise. The term "railroad," whenever used herein, shall mean and embrace express companies, telegraph and telephone companies, and all companies which may own cars of any kind or character, used and operated as a part of railroad trains, in or through this state, and all duties required of and penalties imposed upon any railroad or any officer or agent thereof shall, in so far as the same are applicable, be required of and imposed upon express companies, telegraph and telephone companies, and companies which may own cars of any kind or character, used and operated as a part of railroad trains in or through this state, and their officers and agents, and the commission shall have the power of supervision and control of all such companies to the same extent as of railroads.

Provisions of Act Shall Apply.

(a) The provisions of this act shall apply to the transportation of passengers and property and the transmission of messages between points within the state, and to the receiving, switching, delivering, storing and hauling of such property, and receiving and delivering messages, and to all charges connected therewith, including icing charges and mileage charges, and shall apply to all railroads, corporations, express companies, car companies, freight and freight line companies, and to all associations of persons, whether incorporated or otherwise, that shall do business as common carriers, upon or over any line of railroad within this state, and to any common carrier engaged in the transportation of passengers and property, wholly by rail, or partly by rail and partly by water. *As amended March 20, 1909.*

Reasonable Charges by Railroads Required.

SEC. 3. Every railroad is hereby required to furnish reasonably adequate service and facilities, and the charges made for any service rendered or to be rendered in the transportation of passengers or property or for any service in connection therewith, or for the receiving, switching, delivering, storing or handling of such property, shall be

reasonable and just, and every unjust and unreasonable charge for such service is prohibited and declared to be unlawful.

Railroads Must Print and Post Schedules of Fares and Freights.

SEC. 4. Every railroad shall print in plain type, and file with the commission within a time fixed by the commission, schedules which shall be open to public inspection, showing all rates, fares and charges for the transportation of passengers and property, and any service in connection therewith, which it has established and which are in force at the time between all points in this state upon its line, or any line controlled or operated by it, and the rates, fares and charges shown on such schedules as are in effect at the date this act takes effect. The schedule printed as aforesaid shall plainly state the charges upon its line or any line controlled or operated by it in this state between which passengers and property will be carried, and there shall be filed therewith the classifications of freight in force. Every railroad shall publish with and as a part of such schedules all rules and regulations that in any manner affect the rates charged or to be charged for the transportation of passengers or property, also its charges for delay in unloading or loading cars, for track and car service, or rental, and for demurrage, switching, terminal or transfer service, or for rendering any other service in connection with the transportation of persons or property. Two copies of said schedules for the use of the public shall be filed and kept on file in every depot, station and office of such railroad where passengers or freight are received for transportation in such form and place as to be accessible to the public and where they can be conveniently inspected. When passengers or property are transported over connecting lines in this state operated by more than one railroad, and the several railroads operating such lines establish joint rates, fares and charges, a schedule of joint rates shall also in like manner be printed and filed with the commission, and in every depot, station and office of such railroads where such passengers or property are received for transportation.

No Change in Schedule Except on Notice of 30 Days—Proviso for Reduction.

(a) No change shall thereafter be made in any schedule, including schedule of joint rates, or in any classification, except upon thirty days' notice to the commission, and all such changes shall be plainly indicated upon existing schedules, or by filing new schedules in lieu thereof thirty days prior to the time the same are to take effect; *provided*, that the commission, upon application of any railroad, may prescribe a less time within which a reduction may be made. Copies of all new schedules shall be filed as hereinbefore provided in every depot, station and office of such railroad ten days prior to the time the same are to take effect, unless the commission shall prescribe a less time.

Notice of Change Shall Be Posted.

(b) Whenever a change is made in any existing schedule, including schedule of joint rates, a notice shall be posted by the railroad in a conspicuous place in every depot, station and office, stating that changes have been made in the schedule on file, specifying the class or commodity affected and the date when the same will take effect.

Schedule Must Be Adhered To.

(c) It shall be unlawful for any railroads to charge, demand, collect or receive a greater or less compensation for the transportation of pas-

sengers, property, or for any service in connection therewith, than is specified in such printed schedule, including schedules of joint rates, as may at the time be in force, and the rates, fares and charges named therein shall be the lawful rates, fares, and charges until the same are changed as herein provided.

Commission May Prescribe Changes in Schedule.

(d) The commission may prescribe such changes in the form in which the schedules are issued by the railroad as may be found expedient, and such schedules shall, as far as practicable, conform to the forms prescribed by the Interstate Commerce Commission.

Joint Rates—Proviso.

SEC. 5. Whenever passengers or property are transported over two or more connecting lines of railroads between points in this state, and the railroad companies have made joint rates for the transportation of the same, such rates and all charges in connection therewith shall be just and reasonable, and every unjust and unreasonable charge is prohibited and declared to be unlawful; *provided*, that a less charge by each of said railroads for its proportion of said joint rates than is made locally between the same points on their respective lines shall not for that reason be construed as a violation of the provisions of this act, nor render such railroads liable to any of the penalties hereof.

Rates Must Be Uniform.

SEC. 6. Nothing in this act shall be construed to prevent concentration, commodity, transit and other special contract rates, but all such rates shall be open to all shippers of a like kind of traffic under similar circumstances and conditions, and shall be subject to the provisions of this act as to the printing and filing of the same; *provided*, all such rates shall be under the supervision and regulation of the commission.

Commission Shall Fix Just and Reasonable Rates for All Railroad, Express, Telegraph, and Telephone Service.

SEC. 7. The commission shall have full power to prescribe just and reasonable railroad classifications of freight; and to fix just and reasonable charges for the transportation of all intrastate freight and intrastate passengers, for sleeping-car accommodations, for goods, merchandise, and all matter of every kind carried by express companies within this state, for the transmission of messages by telegraph companies, and for the use of telephone lines within the state. The commission shall also have power to make just and reasonable regulations for the apportionment of all such charges between two or more companies jointly engaged in the transportation of freight, passengers, express matter, telegraph or telephone messages.

May Investigate Physical Condition of All Railroad Appliances.

The commission shall also have full power to investigate the physical condition of all railroad property, and, in the interest of safety or service, shall have power to determine and order repairs, reinforcements or reconstruction of property, including buildings, tracks, and equipment; also the power to determine and order the use of safety appliances in the interest of employees and the traveling public, such as crossing-gates, flagmen, bells, devices, etc., interlocking plants at railway crossings and all other modern safety devices. The commission shall have full power to determine and order the manner in which any

railroad, street railway, steam or electric railway, or other common carrier, may cross another railroad, street railway, whatever the motive power, at grade, or above or below grade, and shall prescribe the safety appliances and regulations that should be adopted at such crossings or at existing grade crossings of railroads, steam, electric, or other motive power railways for the protection of the public and the prevention of accidents. The commission shall have the power, whenever, in its judgment, it shall appear wise and proper to do so, to authorize and direct reasonable changes in train schedules and train service.

May Order Transfer Tracks.

The commission shall have power to determine and order the construction of connecting or transfer tracks between two or more lines of railway, which may now or hereafter enter or pass through any town or city in this state. The expenses of said construction of such tracks to be divided between and paid by the corporations operating said railways.

Railroads Must Transfer Cars.

It shall be the duty of all railroad corporations whose tracks shall be so connected reciprocally to transfer cars from one railroad to the other upon demand of shippers or the railroad concerned, and for which transfer service reasonable charges may be made.

Short Haul and Long Haul.

Nothing in this act shall be construed so as to allow any railroad to charge more for a shorter than for a longer haul, either for passengers or freight, when the shorter haul is included within the longer or to authorize the commission to allow such charge to be made. *As amended March 20, 1909.*

Government Freight May Go Free—Passes, Etc., to Certain Persons.

SEC. 8. Nothing herein shall prevent the carriage, storage, or handling of freight free or at reduced rates for the United States, the state or any political subdivision thereof, or any municipality thereof, or for charitable purposes, or to and from fairs and expositions for exhibition thereat, or household goods and supplies, the property of employees, or the issuance of mileage, commutation, or excursion passengers' tickets; *provided*, that the same shall be obtainable by any persons applying therefor, without discrimination, or of party tickets; *provided*, that the same shall be obtainable by any person applying therefor under like circumstances and conditions. This act shall not be construed as preventing railroads from giving free transportation or reduced rates therefor to any minister of the gospel, constable in any county of the state, officer or agent of incorporated colleges, college professors, school teachers, students attending institutions of learning, regular agents of charitable societies when traveling upon the business of the society only; destitute or homeless persons, railroad officers, attorneys, directors, employees or members of their families, or bona fide ex-railroad employees of any steam or electric railroad in search of employment, or to prevent the exchange of passes with officers, attorneys, or employees of other railroads and members of their families.

Attendants for Live Stock.

(a) Upon any shipment of live stock or other property of such nature as to require the care of an attendant, the railroad may furnish to the

shipper, or some person or persons designated by him, free transportation for such attendant, including return passage to the point at which the shipment originated; *provided*, that there shall be no discrimination in reference thereto between such shippers, and the commission shall have power to prescribe regulations in relation thereto. *As amended March 20, 1909, and March 27, 1911.*

Depots Must Be Maintained in Good Condition.

SEC. 9. It shall be the duty of every railroad to provide and maintain adequate depots and depot buildings at its regular stations and establish new stations wherever required, for the accommodation of passengers, and said depot building shall be kept clean, well lighted and warm for the comfort and accommodation of the traveling public. All railroads shall keep and maintain adequate and suitable freight depots, wherever needed, buildings, switches and sidetracks for the receiving, handling and delivering of freight transported or to be transported by such railroad; *provided*, that this shall not be construed as repealing any existing law on the subject; *provided further*, that to remove all doubts which have arisen upon the subject, the commission is specifically invested with full power to enforce the provisions of this section and of this entire act. *As amended March 20, 1909.*

Railroads Shall Furnish Cars for Shippers—Live Stock, Etc., Preferred.

SEC. 10. Every railroad shall, when within its power to do so, and upon reasonable notice, furnish suitable cars to any and all persons who may apply therefor, for the transportation of any and all kinds of freight in carload lots. In case of insufficiency of cars at any time to meet all requirements, such cars as are available shall be distributed among the several applicants therefor in proportion to their respective immediate requirements without discrimination between shippers or competitive or noncompetitive places; *provided*, preference may be given to shipments of live stock and perishable property.

Commission May Enforce Reasonable Regulations.

(a) The commission shall have the power to enforce reasonable regulations for furnishing cars to shippers, and switching the same, and for the loading and unloading thereof, and the weighing of the cars and freight offered for shipment over any line of railroad.

Proper Facilities for Interchange of Traffic.

SEC. 11. All railroad companies as between themselves, and all inter-urban and electric railroads as between themselves and each other, shall afford all reasonable and proper facilities for the interchange of traffic between their respective lines for forwarding and delivering passengers and property, and shall transfer and deliver without unreasonable delay or discrimination any freight or cars, loaded or empty, or any passengers destined to any point on its own or any connecting lines; *provided*, that precedence over other freight may be given to live stock and perishable freight.

Commission Shall Have Control of Private Tracks.

(a) The commission shall have control over private tracks in so far as the same are used by common carriers, in connection with any railroad for the transportation of freight, in all respects the same as though such tracks were a part of the track of said railroad.

Commission Must Investigate All Complaints—Notice to Railroads and Complainants.

SEC. 12. Upon complaint of any person, firm, corporation or association, or of any mercantile, agricultural or manufacturing society, or of any body politic or municipal organization, that any of the rates, charges or classifications, or any joint rate or rates are in any respect unreasonable or unjustly discriminatory, or that any regulation or practice whatsoever affecting the transportation of persons or property, or any service in connection therewith, are in any respect unreasonable or unjustly discriminatory, or that any service is inadequate, the commission may notify the railroad complained of that complaint has been made, and ten days after such notice has been given the commission may proceed to investigate the same as hereinafter provided, but before proceeding to make such investigation the commission shall give the railroads and the complainants ten days' notice of the time and place when and where such matters will be considered and determined, and said parties shall be entitled to be heard and shall have process to enforce the attendance of witnesses. If upon such investigation the rate or rates, or any regulation, practice or service complained of shall be found to be unreasonable or unjustly discriminatory, or the service shall be found to be inadequate, the commission shall have power to fix and order substituted therefor such rate or rates, fares, charges or classifications, as it shall have determined to be just and reasonable and which shall be charged, imposed and followed in the future, and shall also have power to make such orders respecting such regulation, practice or service, as it shall have determined to be reasonable and which shall be observed and followed in the future.

Commission May Order Separate Hearings.

(a) The commission may, when complaint is made of more than one rate or charge, order separate hearings thereon, and may consider and determine the several matters complained of separately, and at such times as it may prescribe. No complaint shall of necessity at any time be dismissed because of the absence of direct damage to the complainant.

Commission May Take the Initiative.

(b) Whenever the commission shall believe that any rate or rates or charge or charges may be unreasonable or unjustly discriminatory, and that investigation relating thereto should be made, it may, upon its own motion, investigate the same. Before making such investigation it shall present to the railroad a statement in writing, setting forth the rate or charge to be investigated. Thereafter, on ten days' notice to the railroad of the time and place of such investigation, the commission may proceed to investigate such rate or charge in the same manner and make like orders in respect thereto as if such investigation had been made upon complaint.

This Section Construed.

(c) This section shall be construed to permit any railroad to make complaint with like effect as though made by any person, firm, corporation or association, mercantile, agricultural or manufacturing society, body politic or municipal organization.

Various Powers of Commission.

SEC. 13. Each of the commissioners, for the purposes mentioned in

this act, shall have power to administer oaths, certify to official acts, issue subpoenas, compel the attendance of witnesses, and the production of papers, way-bills, books, accounts, documents and testimony. In the case of disobedience on the part of any person or persons to comply with any order of the commission or any commissioner or any subpoena, or on the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, it shall be the duty of the district court of any county, or a judge thereof, on application of a commissioner, to compel obedience by attachment proceedings for contempt, as in the case of disobedience of the requirements of a subpoena issued from such court, or a refusal to testify therein.

Fees and Mileage for Witnesses—Proviso.

(a) Each witness who shall appear before the commission by its order shall receive for his attendance the fees and mileage now provided for witnesses in civil cases in courts of record, which shall be audited and paid by the state in the same manner as other expenses are audited and paid, upon the presentation of proper vouchers, sworn to by such witnesses and approved by the chairman of the commission; *provided*, that no witness subpoenaed at the instance of parties other than the commission shall be entitled to compensation from the state for attendance or travel unless the commission shall certify that his testimony was material to the matter investigated.

Depositions.

(b) The commission or any party may, in the investigation, cause the depositions of witnesses residing within or without the state to be taken in the manner prescribed by law for like depositions in civil actions in district courts.

Complete Records Must Be Kept—Certified Copy Received in Evidence.

(c) A full and complete record shall be kept of all proceedings had before the commission or any investigation had under section 12 of this act, and all testimony shall be taken down by the stenographer appointed by the commission. Whenever any complaint is served upon the commission under the provisions of section 16 of this act the commission shall, before said action is reached for trial, cause a certified transcript of all proceedings had and testimony taken upon such investigation to be filed with the clerk of the district court of the county where the action is pending. A transcribed copy of the evidence and proceedings, or any specific part thereof, or any investigation, taken by the stenographer appointed by the commission, being certified by such stenographer to be a true and correct transcript in longhand of all testimony taken at the investigation, or of a particular witness, or of other specific part thereof, carefully compared by him with his original notes, and to be a correct statement of the evidence and proceedings had on such investigation so purporting to be taken and transcribed, shall be received in evidence with the same effect as if such reporter were present and testified to the facts so certified. A copy of such transcript shall be furnished on demand, free of cost, to any party to such investigation; and to all other persons, a copy, on payment of a reasonable amount therefor, to be fixed by the commission. *As amended March 20, 1909.*

Commission Shall Fix Reasonable Rates—Joint Rates.

SEC. 14. Whenever, upon an investigation made under the provisions

of this act, the commission shall find any existing rate or rates, fares, charges or classification, or any joint rates or rates, or any regulation or practice whatsoever, affecting the transportation of persons or property, or any service in connection therewith, are unreasonable or unjustly discriminatory, or any service is inadequate, it shall determine and by order fix a reasonable rate, fare, charge, classification or joint rate to be imposed, observed and followed in the future in lieu of that found to be unreasonable or unjustly discriminatory, and it shall determine and by order fix a reasonable regulation, practice or service to be imposed, observed or followed in the future, in lieu of that found to be unreasonable or unjustly discriminatory or inadequate, as the case may be, and it shall cause a certified copy of each such order to be delivered, to an officer or station agent of the railroad affected thereby, which order shall of its own force take effect and become operative thirty days after the service thereof. All railroads to which the order applies shall make such changes in their schedule on file as may be necessary to make the same conform to said order, and no change shall thereafter be made by any railroad in any such rates, fares or charges, or in any joint rate or rates, without the approval of the commission. Certified copies of all other orders of the commission shall be delivered to the railroads affected thereby, in like manner, and the same shall take effect within such time thereafter as the commission shall prescribe.

Commission May Rescind or Alter Its Own Orders.

(a) The commission may at any time, upon application of any person or any railroad, and upon notice to the parties interested, and after opportunity to be heard as provided in section 12, rescind, alter or amend any order fixing any rate or rates, charges or classification, or any other order made by the commission, and certified copies of the same shall be served and take effect as herein provided for original orders. *As amended March 20, 1909.*

Rates in Force Until Changed.

SEC. 15. All rates, fares, charges, classifications and joint rates fixed by the commission shall be in force, and shall be prima facie lawful, until changed or modified by the commission, or in pursuance of section 16 of this act. All regulations, practices and services prescribed by the commission shall be in force and shall be prima facie reasonable, unless suspended or found otherwise in an action brought for that purpose, pursuant to the provisions of section 16 of this act, or until changed or modified by the commission as provided for in paragraph a, section 14, of this act. *As amended March 20, 1909.*

Railroad May Commence Legal Action Within Ninety Days—Shall Have Precedence.

SEC. 16. Any railroad or other party in interest being dissatisfied with any order of the commission fixing any rate or rates, fares, charges, classifications, joint rate or rates, or any order fixing any regulations, practices or services, may, within ninety days, commence an action in the district court of the proper county, against the commission as defendant, to vacate and set aside any such order on the ground that the rate or rates, fares, charges, classifications, joint rate or rates, fixed in such order is unlawful or unreasonable, or that any such regulation, practice or service fixed in such order is unreasonable,

in which action the adverse parties shall be served with a summons and copy of the complaint. The commission shall file its answer, and on leave of court, any interested party may file the answer to said complaint within thirty days, after the service thereof, whereupon said action shall be at issue and stand ready for trial upon 'twenty days' notice by either party. All actions brought under this section shall have precedence over any civil cause of a different nature pending in such court, and the court shall always be deemed open for the trial thereof, and the same shall be tried and determined as other civil actions; any party to such action may introduce original evidence in addition to the transcript of the evidence offered to said commission.

No Injunction Issued Without Notice to Commission.

(a) No injunction shall issue suspending or staying any order of the commission except upon application to the court or judge thereof, notice to the commission having been first given and hearing having been had thereon; *provided*, that all rates fixed by the commission shall be deemed reasonable and just, and shall remain in full force and effect until final determination by the courts, upon appeal.

Commission Must Have Notice of New Evidence.

(b) If, upon the trial of such action, evidence shall be introduced by the plaintiff which is found by the court to be different from that offered upon the hearing before the commission, or additional thereto, the court before proceeding to render judgment, unless the parties to such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the commission, and shall stay further proceedings in said action for fifteen days from the date of such transmission. Upon receipt of such evidence the commission shall consider the same, and may alter, modify, amend or rescind its order relating to such rate or rates, fares, charges, classifications, joint rate or rates, regulation, practice or service complained of in said action, and shall report its action thereon to said court within ten days from the receipt of such evidence.

Judgments, How Rendered.

(c) If the commission shall rescind its order complained of, the action shall be dismissed; if it shall alter, modify or amend the same, such altered, modified or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon, as though made by the commission in the first instance. If the original order shall not be rescinded or changed by the commission, judgment shall be rendered upon such original order.

Appeals.

(d) Either party to said action within sixty days after service of a copy of the order or judgment of the court may appeal or take the case up on error as in other civil actions. Where an appeal is taken the cause shall, on the return of the papers to the higher court, be immediately placed on the calendar of the then pending term, and shall be assigned and brought to a hearing in the same manner as other causes on the calendar.

Burden of Proof on Plaintiff.

(e) In all actions under this section the burden of proof shall be upon the plaintiff to show by clear and satisfactory evidence that the

order of the commission complained of is unlawful, or unreasonable, as the case may be.

Same Practice as Civil Actions.

SEC. 17. In all actions and proceedings in court arising under this act all processes shall be served, and the practice and rules of evidence shall be the same as in civil actions, except as otherwise herein provided. Every sheriff or other officer empowered to execute civil processes shall execute any process issued under the provisions of this act, and shall receive such compensation therefor as may be prescribed by law for similar services.

No Person Excused from Testifying—Proviso.

(a) No person shall be excused from testifying or from producing books and papers in any proceedings based upon or growing out of any violation of the provisions of this act, on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to penalty or forfeiture, but no person having so testified shall be prosecuted or subjected to any penalty or forfeiture for, or on account of, any transaction, matter or thing concerning which he may have testified or produced any documentary evidence; *provided*, that no person so testifying shall be exempted from prosecution or punishment for perjury in so testifying.

Certified Copies Prima Facie Evidence.

(b) Upon application of any person the commission shall furnish certified copies, under the seal of the commission, of any order made by it, which shall be prima facie evidence in any court or proceeding of the facts stated therein.

Authority of Commission.

SEC. 18. The commission shall have the authority to inquire into the management of the business of all railroads, and shall keep itself informed as to the manner and method in which the same is conducted, and shall have the right to obtain from any railroad all necessary information to enable the commission to perform the duties and carry out the objects for which it was created.

Blanks—Perjury, When.

(a) The commission shall cause to be prepared suitable blanks for the purposes designated in this act, which shall conform as nearly as practicable to the forms prescribed by the Interstate Commerce Commission, and shall, when necessary, furnish such blanks to each railroad. Any railroad receiving from the commission any such blanks shall cause the same to be properly filled out so as to answer fully and correctly each question therein propounded, and in case it is unable to answer any question it shall give a good and sufficient reason for such failure, and said answer shall be verified under oath by the proper officer of said railroad and returned to the commission at its offices within the time fixed by the commission; the making of a false affidavit or filing of the same shall be deemed perjury and punishable as such under the statutes of Nevada defining perjury.

Right of Inspection—Proviso.

(b) The commission, or any commissioner, or any person or persons employed by the commission for that purpose, shall, upon demand,

have the right to inspect the books and papers of any railroad and to examine under oath any officer, agent or employee of such railroad in relation to any matter which is the subject of complaint and investigation; *provided*, that any person other than the one of the said commissioners who shall make such demand shall produce his authority to make such inspection under the hand of a commissioner, or of the secretary and under the seal of said commission.

Orders and Subpenas—Penalties.

(c) The commission may require by order or subpena, and to be served on any railroad, in the same manner that a summons is served in a civil action in a district court, the production within this state, at such time and place as it may designate, of any books, papers or accounts relating to any matter which is the subject of complaint or investigation kept by said railroad in any office or place without the State of Nevada, or verified copies in lieu thereof, if the commission shall so order, in order that an examination thereof may be made by the commission or under its direction, and such subpena may issue to any sheriff in any county of the state. Any railroad failing or refusing to comply with any such order or subpena within a reasonable time shall, for each day it shall so fail or refuse, forfeit and pay into the state treasury a sum of not less than one hundred dollars nor more than one thousand dollars, to be recovered in a civil action brought in the name of the Railroad Commission of Nevada.

Railroads Shall Submit Contracts.

SEC. 19. Every railroad, whenever required by the commission, shall, within a time to be fixed by the commission, deliver to the commission for its use copies of all contracts which relate to the transportation of persons or property, or any service in connection therewith made or entered into by it with any other railroad company, terminal company, depot company, equipment company, car company, express or other transportation company, bridge company, or any shipper or shippers, producers or consumers, or other persons doing business with it.

Railroads Shall Report Annually Concerning Passes, Etc.

(a) Every railroad shall, on the first Monday in January of each year, and oftener if required by the commission, file with the commission a verified list of all railroad tickets, passes, and mileage books issued free or for other than actual bona fide money consideration at full established rates during the preceding year, together with the names of the recipients thereof, the amount received therefor, and the reason for issuing the same. This provision shall not apply to the sale of tickets at reduced rates open to the public. *As amended March 20, 1909.*

Full Reports of Nevada Business.

SEC. 20. Every railroad company incorporated or doing business in this state, or which shall hereafter become incorporated or do business in this state shall, on or before the 15th day of September, 1907, and on or before the same day of each year thereafter, make and transmit to the commission in its office in Nevada a full and true statement, under oath of the proper officer of such corporation, of the affairs of such corporation relative to the State of Nevada, for the year ending on the

30th day of June preceding, which statement for the State of Nevada shall be similar in character and detail to the annual report required to be made by railroad companies to the Interstate Commerce Commission, and such other and further information as may be required by the commission.

Commission Shall Cooperate with Interstate Commerce Commission.

SEC. 21. The commission shall have power, and on complaint of any person it is hereby made its duty, to investigate all or any freight rates on interstate traffic on railroads in this state, and when the same are, in the opinion of the commission, excessive or discriminatory, or are levied or laid in violation of the interstate commerce law, or in conflict with the rulings, orders or regulations of the Interstate Commerce Commission, the commission shall present the facts to the railroad, with a request to make such changes as the commission may advise, and if such changes are not made within a reasonable time, the commission shall apply by petition to the Interstate Commerce Commission for relief. All freight tariffs issued by any such railroad relating to interstate traffic in this state shall be filed in the office of the commission within thirty days after the passage of this act, and all such tariffs thereafter issued shall be filed with the commission when issued.

Penalties for Railroads for Discriminatory Charges.

SEC. 22. If any railroad, or any agent or officer thereof, shall directly or indirectly, by any special rate, rebate, drawback, or by means of false billing, false classification, false weighing, or by any other device whatsoever, charge, demand, collect or receive from any person, firm, or corporation a greater or less compensation for any service rendered or to be rendered by it for the transportation of persons or property or for any service in connection therewith than that prescribed in the published tariffs then in force, or established as provided herein, or than it charges, demands, collects or receives from any other person, firm, or corporation for a like and contemporaneous service in the transportation of a like kind of traffic under substantially similar circumstances and conditions, such railroads shall be deemed guilty of unjust discrimination, which is hereby prohibited and declared to be unlawful, and upon conviction thereof shall forfeit and pay into the state treasury not less than one hundred dollars nor more than five thousand dollars for such offense; and any agent or officer so offending shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than fifty dollars nor more than one thousand dollars for each offense.

Certain Prohibitions.

(a) It shall be unlawful for any railroad to demand, charge, collect or receive from any person, firm or corporation, a less compensation for the transportation of property or for any service rendered or to be rendered by said railroad in consideration of said person, firm or corporation furnishing any part of the facilities incident thereto; *provided*, nothing herein shall be construed as prohibiting any railroad from procuring any facilities or service incident to transportation and paying a reasonable compensation therefor.

Discrimination Prohibited.

SEC. 23. That it shall be unlawful for any common carrier subject

to the provisions of this act to make or give any undue or unreasonable preference or advantage to any particular person, company, firm, corporation, or locality, or any particular description of traffic, in any respect whatsoever, or to subject any particular person, company, firm, corporation, or locality, or any particular description of traffic, to any undue or unreasonable prejudice or disadvantage in any respect whatsoever.

Acceptance of Rebates, Etc., Prohibited—Penalty.

SEC. 24. It shall be unlawful for any person, firm, or corporation knowingly to accept or receive any rebate, concession or discrimination in respect to transportation of any property wholly within this state, or for any service in connection therewith, whereby any such property shall by false billing, false classification, false weighing, or any other device whatsoever, be transported at a less rate than that named in the published tariffs in force as provided herein, or whereby any service or advantage is received other than is herein specified. Any person, firm or corporation violating the provisions of this section shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than fifty dollars nor more than one thousand dollars for each offense.

Passes to Public Officers Prohibited.

SEC. 25. It shall be unlawful for any person, firm or corporation engaged in business as a common carrier to give or furnish to any state, district, county or municipal officer of this state, or to any person other than those mentioned in section 8, any pass, frank, free or reduced transportation, or for any such state, district, county or municipal officer to accept such frank, pass, free or reduced transportation. Any firm, person or corporation, or the agent thereof, or any state, district, county or municipal officer violating the provisions of this section shall, upon conviction thereof, be fined in any sum not less than one hundred dollars, or more than five hundred dollars, and in addition to such penalty the office of any such state, district, county or municipal officer shall, upon his conviction, *ipso facto* become vacant. *As amended March 20, 1909.*

Treble Damages, When.

SEC. 26. If any railroad shall do or cause to be done or permit to be done any matter, act or thing in this act prohibited or declared to be unlawful, or shall omit to do any act, matter or thing required to be done by it, such railroad shall be liable to the person, firm or corporation injured thereby in treble the amount of damages sustained in consequence of such violation; *provided*, that any recovery as in this section provided shall in no manner affect the recovery by the state of the penalty prescribed for such violation.

Failure or Evasion of Railroad Employees Punished.

SEC. 27. Any officer, agent or employee of any railroad who shall wilfully fail or refuse to fill out and return any blanks as required by this act, or shall wilfully fail or refuse to answer any questions therein propounded, or shall knowingly or wilfully give a false answer to any such questions, or shall evade the answer to any such question, where the fact inquired of is within his knowledge, or who shall, upon proper demand, wilfully fail or refuse to exhibit to any commissioner or any

commissioners, or any person authorized to examine the same, any book, paper or account of such railroad, which is in his possession or under his control, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than one hundred dollars nor more than one thousand dollars for each such offense, and a penalty of not less than five hundred dollars nor more than one thousand dollars shall be recovered from the railroad for each such offense when such officer, agent, or employee acted in obedience to the direction, instructions or request of such railroad or any general officer thereof.

Penalty for All Acts of Omission or Commission.

SEC. 28. If any railroad shall violate any provision of this act, or shall do any act herein prohibited, or shall fail, or refuse to perform any duty enjoined upon it, or upon failure of any railroad to place in operation any rate or joint rate, or do any other act herein prohibited, for which a penalty has not been provided, or shall fail, neglect or refuse to obey any lawful requirement or order made by the commission or any court (upon its application), for every such violation, failure or refusal, such railroad or railroads shall forfeit and pay into the state treasury a sum of not less than one hundred dollars nor more than ten thousand dollars for each offense. In construing and enforcing the provisions of this section, the act, omission or failure of any officer, agent, or other person acting for or employed by any railroad, acting within the scope of his employment shall in every case be deemed to be the act, omission or failure of such railroad.

Commission May Regulate All Practices.

SEC. 29. Whenever, after hearing and investigation as provided by this act, the commission shall find that any charge, regulation, or practice affecting the transportation of passengers or property, or any service in connection therewith, not hereinbefore specifically designated, is unreasonable or unjustly discriminatory, it shall have the power to regulate the same as provided in sections 12 and 14 of this act.

Commission To Be Immediately Notified of Fatal Accidents—Investigation.

SEC. 30. Every railroad shall, whenever an accident attendant with loss of human life occurs within this state, upon its line of road or on its depot grounds or yards, give immediate notice thereof to the commission. In the event of any such accident, the commission, if it deem the public interest requires it, shall cause an investigation to be made forthwith, which investigation shall be held in the locality of the accident, unless, for greater convenience of those concerned, it shall order such investigation to be held at some other place, and said investigation may be adjourned from place to place as may be found necessary and convenient. The commission shall seasonably notify an officer or station agent of the company of the time and place of the investigation. The cost of such investigation shall be certified by the chairman of the commission, and the same shall be audited and paid by the state in the same manner as other expenses are audited and paid and a record or file of said proceedings and evidence shall be kept by said commission.

Attorney-General and Prosecuting Attorneys Must Assist Commission.

SEC. 31. The commission shall inquire into any neglect or violation

of the laws of this state by any such railroad corporation hereinbefore defined doing business therein, or by the officers, agents or employees thereof, or by any person operating a railroad, and shall have the power and it shall be its duty to enforce the provisions of this act as well as all other laws relating to railroads and report all violations thereof to the attorney-general; upon request of the commission it shall be the duty of the attorney-general or the prosecuting attorney of the proper, or any, county to aid in any investigation, prosecution, hearing or trial had under the provisions of this act, and to institute and prosecute all necessary actions or proceedings for the enforcement of this act and all other laws of this state relating to railroads and for the punishment of all violations thereof. Any forfeiture or penalty herein provided shall be recovered and suit thereon shall be brought in the name of the State of Nevada in the district court of any county having jurisdiction of the defendant. The attorney-general of Nevada shall be the counsel in any proceeding, investigation, hearing or trial prosecuted or defended by the commission or any prosecuting attorney selected by said commission, or other special counsel furnished said commission, in any county where such action is pending.

All Claims for Damages May Be Investigated by Commission.

SEC. 32. All claims against any railroad for loss of or damage to property from any cause, or for overcharge upon any shipments, or for any other service, if not acted upon within ninety days from the date of the filing of such claim with the railroad, may be investigated by the commission, in its discretion, and the result of such investigation shall be duly recorded and filed in the archives of the commission, be open to examination by the public, and be embodied in the commission's next regular report. The regular reports of the commission shall be made to the governor annually as soon after the thirty-first day of December in each year as may be feasible in order to bring the report down to that date.

Printing Done at State Printing Office.

(a) It is hereby further provided that, except in cases of emergency, all the necessary printing of the commission shall be done at the state printing office, and it is made the duty of the state printer to have such printing done as expeditiously as possible. *As amended March 20, 1909.*

Technicalities Ignored.

SEC. 33. A substantial compliance with the requirements of this act shall be sufficient to give effect to all rules, orders, acts and regulations of the commission, and they shall not be declared inoperative, illegal or void for any omission of a technical nature in respect thereto.

This Act Shall Not Affect Any Suits at Law.

SEC. 34. This act shall not have the effect to release or waive any right of action by the state or by any person for any right, penalty, or forfeiture which may have arisen or which may hereafter arise under any law of this state; and all penalties and forfeitures accruing under this act shall be cumulative and a suit for, and recovery of, one shall not be a bar to the recovery of any other penalty.

Commission May Use Any Civil Remedy.

SEC. 35. In addition to all the other remedies provided by this act.

for the prevention and punishment of any and all violations as to the provisions hereof and all orders of the commission, the commission can compel compliance with the provisions of this act and of the orders of the commission by proceedings in mandamus, injunction or by other civil remedies.

Railroads Shall File Schedules.

SEC. 36. Every railroad in this state shall, within sixty days after the passage of this act, file in the office of the commission copies of all schedules of rates, including joint rates in force on its line or lines, between points within this state on the date this act takes effect.

This Act Construed.

SEC. 37. Each section of this act and every part of each section is hereby declared to be independent sections and parts of sections and the holding of any section or part thereof to be void or ineffective for any cause shall not be deemed to affect any other section or any part thereof.

Repeal.

SEC. 38. All acts and parts of acts in conflict with this act are hereby repealed.

RULES OF PRACTICE

For the proper and orderly exercise of the powers conferred by law upon the Railroad Commission of Nevada, the following rules of practice are hereby adopted, the eighth day of May, A. D. 1907:

RULE I

The general sessions of the commission for hearing contested cases, will be held at its office in Carson City, Nevada, on such days and at such hours as the commission may designate. When special sessions are to be held at other places, the commission will make such orders and regulations with reference thereto as may be necessary. All such hearings shall be public.

RULE II

Any person feeling himself aggrieved, by any railroad, telegraph, telephone or express company, or any common carrier, may file his complaint with the secretary of the commission. The secretary must indorse on the complaint the day, month and year that it is filed, and must, at the request of the party filing the same, issue a summons thereon. If such request be not made within three months after the filing of the complaint, the request shall be disregarded, but the party shall have leave, if he so desires, to file a new complaint. Both the complaint and the answer thereto shall be verified in the manner prescribed by the code of civil procedure of this state. The party complaining shall be known as the plaintiff.

RULE III

The summons must be directed to the defendant, must be signed by the secretary, and attested by the seal of the commission, and must contain:

First—The names of the parties to the proceeding.

Second—A brief statement of the nature of the complaint.

Third—A direction that the defendant appear and answer the complaint within a time to be specified in the summons, which shall in no case be less than ten (10) days.

RULE IV

The summons may be served by any officer authorized by law to serve such process in civil proceedings, or by any male citizen of the state, and shall be served by delivering a copy thereof together with a copy of the complaint to the defendant; or, if the defendant is a corporation, to the president, secretary, treasurer, resident agent, managing agent, or other person in general charge of the company's business within this state, by whatever title he may be designated. Proof of such service shall be as follows:

If made by one of the officers aforesaid within the territory to which his official authority extends, by his certificate.

If by such officer outside of such territory, or by any other person, by his affidavit showing the time, place and manner of service.

RULE V

From the time of service of the summons and copy of complaint, the commission shall be deemed to have acquired jurisdiction of the parties and subject-matter. The voluntary appearance of the defendant shall be deemed a waiver of summons.

RULE VI

The complaint must contain:

First—The names of the parties to the proceedings.

Second—A statement of the alleged grievance in ordinary and concise language, giving such particulars of time, place and circumstance as will enable the defendant to answer the same intelligently.

Third—A demand for the relief claimed.

RULE VII

The plaintiff may embody as many causes in the same complaint as he may have, but the causes so embodied shall be separately stated so that each may be separately denied or objected to.

RULE VIII

The party complained against shall be known as the defendant, and within the time specified in the summons for answering, may file an objection, in the nature of a demurrer to the complaint upon the following grounds:

First—That it does not state facts sufficient to authorize the proceedings.

Second—If the complaint contains more than one cause or alleged grievance, that they are not separately stated.

Third—That the complaint is ambiguous, uncertain or unintelligible.

RULE IX

If the objection is sustained, the plaintiff may within ten (10) days after receiving written notice of the decision, amend his complaint. If the objection is overruled, the defendant may, within a like period, answer the complaint; *provided*, that if the party against whom such ruling is made is present when the commission makes its ruling, no written notice thereof shall be required, and the ten-day period shall begin to run at once.

RULE X

The answer of the defendant should contain:

First—A specific denial of each material allegation contained in the complaint.

Second—A statement of any new matter of defense, or matter in mitigation or explanation of the charges made in the complaint.

RULE XI

The plaintiff may within ten (10) days after the service of the answer object or demur to the same upon the following grounds:

First—That the facts therein stated do not constitute a defense.

Second—That it is ambiguous, uncertain or unintelligible.

RULE XII

The complaint, answer and demurrer must be subscribed by the party to the proceeding, or by some attorney at law on his behalf.

RULE XIII

The pleadings, summons, subpoenas, affidavits and all papers to be filed or used in any proceeding before the commission should be entitled:

“BEFORE THE RAILROAD COMMISSION OF NEVADA.”

All such papers should be either typewritten or printed, and when not printed only one side of the paper should be used.

RULE XIV

The testimony of any witness may be taken by deposition, at the instance of a party, in any proceedings or investigation before the commission, and at any time after the same is at issue. The commission may order testimony to be taken by deposition, in any proceeding or investigation pending before it, at any stage of such proceeding or investigation. Such deposition may be taken before any judge of any court of the United States, or any commissioner of a circuit, or any clerk of a district or circuit court, or any chancellor, justice or judge of a supreme or superior court, mayor or chief magistrate of a city, judge of a county court, or court of common pleas of any of the United States, or any notary public, not being of counsel or attorney to either of the parties, or otherwise interested in the proceeding or investigation. The same notice of taking deposition that is required by the laws of Nevada in taking depositions in civil cases must be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, which notice shall state the name of the witness and the time and place of the taking of his deposition, and a copy of such notice shall be filed with the secretary.

When testimony is to be taken on behalf of a common carrier in any proceeding instituted by the commission on its own motion, notice

thereof, in writing, must be given by such carrier to the commission itself, or to such person as may have been previously designated by the commission to be served with such notice.

Every person whose deposition is taken shall be sworn (or may affirm, if he so request) to testify the whole truth, and shall be carefully examined. His testimony shall be reduced to writing, which may be type-writing, by the magistrate taking the deposition, or under his direction, and shall, after it has been reduced to writing, be subscribed by the witness.

RULE XV

Proposed findings embracing the material facts claimed to be established by the evidence, and referring to the particular part of the record relied upon to support each finding proposed, may be filed by each party. Printed or written arguments or briefs may be filed by any party. A copy of the proposed findings, brief or argument filed on behalf of any party, must at the same time be served upon the adverse party or parties, personally or by mail, and notice of such service thereupon filed with the secretary of the commission. The time within which proposed findings and printed or written arguments or briefs shall be filed in any case will be determined by the commission upon submission of the testimony.

RULE XVI

The commission will, at every stage of any proceeding before it, disregard any error or defect in the pleadings or other papers which do not affect the substantial rights of the parties. It will also be liberal in allowing such amendments of the pleadings as justice may require, and in enlarging the time, upon proper application, within which any pleading may be required. Sham or redundant matter in any pleading will be stricken out and disregarded.

RULE XVII

If the defendant fail to appear and answer the complaint, the commission will, at the time set for the hearing, proceed with the investigation, the same as if an answer had been duly filed. At such hearing the defendant may cross-examine the plaintiff's witnesses, and may offer testimony tending to disprove the allegations of the complaint, but will not be allowed to prove any new matter of defense that has not been pleaded.

RULE XVIII

Either party to the proceeding may, by leave of the commission, file a supplemental pleading. When such pleading is filed, the adverse party shall be given such time as the commission may prescribe in which to answer, demur, move to strike out, or take such other action as may be deemed proper in the premises.

RULE XIX

The secretary shall keep a calendar of the proceedings at issue, showing the status of each, and whether the issue be one of law or fact. Issues of law shall be first disposed of.

RULE XX

Either party upon not less than ten (10) days' notice to the other party, or the commission of its own motion, upon ten (10) days' notice

to both parties, may bring any proceeding to a hearing for the final disposition of the issue made, whether it be one of law or fact. But no such hearing shall be had without ten (10) days' notice of the time and place of the hearing, unless the parties themselves, with the concurrence of the commission, agree in writing upon a shorter time.

RULE XXI

Motions for postponement of a hearing will only be considered upon affidavit showing good and sufficient reasons therefor, and in determining what are good and sufficient reasons, the commission will be governed generally by the rules which prevail in courts of equity, reserving to itself the right to determine whether the application is made in good faith, for sufficient reason, or merely for delay.

RULE XXII

Any person having an interest in the subject-matter of a proceeding pending before the commission may, by leave of the commission, intervene at any time before the hearing upon the merits. When such leave is granted, the party intervening must file his pleading with the secretary, and serve a copy upon the adverse party, who shall have such time to plead thereto as may be fixed by the commission, which shall not be in any case less than ten (10) days.

The pleadings upon intervention shall be governed by the same rules as those which apply to the original pleadings in the proceedings.

RULE XXIII

Any party to a proceeding before the commission, feeling aggrieved at the final decision, may within sixty (60) days apply for a rehearing. Such application shall be in writing, filed with the secretary, and served by copy upon the adverse party, and may be made upon one or more of the following grounds:

First—Irregularity in the proceedings, or abuse of discretion whereby the party was prevented from having a fair hearing.

Second—Accident or surprise, which ordinary prudence could not have guarded against.

Third—Newly discovered evidence, material for the party making the application, which could not with reasonable diligence have been discovered and produced at the trial.

Fourth—Insufficiency of the evidence to justify the decision, or that it is against law.

When the application is made upon the first ground named, it shall be based upon affidavit showing clearly the irregularity or abuse of discretion complained of.

When made upon the second ground, it must be based upon affidavit showing the precise nature of the accident or surprise, and why it could not have been guarded against.

When made upon the third ground, it must be supported by affidavit showing the nature of the newly discovered evidence, its materiality, and why it could not have been produced at the hearing.

When made upon the fourth ground, it shall be sufficient to refer to the evidence contained in the record, and state generally wherein it is against law.

RULE XXIV

If the commission shall be of the opinion that a sufficient showing has been made to justify a rehearing, it will, in writing, notify all parties to the proceeding of the time and place of the rehearing, which shall be not less than ten (10) days, at which rehearing only such matters will be considered as have been made the basis of the application.

If the commission be of the opinion that the application is not well founded, it will deny the same, and so notify, in writing, the party applying. Upon a rehearing being granted the commission will affirm, reverse and vacate, or modify the decision or order complained of.

RULE XXV

A full and complete record shall be kept of all proceedings before the commission, and all the testimony shall be taken down by the stenographer appointed by the commission for the purpose.

A duly certified copy of such record, including the testimony, objections, rulings of the commission and exceptions noted, will be furnished free of cost to any party of record, and to all other persons a copy will be furnished at the actual cost of making the same.

Nothing herein shall be so construed as to require the stenographer to take down the arguments of counsel, beyond the simple statement of their objections and exceptions.

If any counsel desires his remarks reported in full, it may be done at his own expense, but such remarks will constitute no part of the record of the proceeding.

RULE XXVI

In ruling upon demurrers and independent motions the decisions of the commission may, in its discretion, either be oral and briefly noted in the secretary's minutes, or in writing.

The rulings made in the progress of a hearing or investigation, shall be taken down by the stenographer, and constitute a part of the record.

The final decision shall, in all cases, be in writing and embodied in the record as a part thereof.

RULE XXVII

Any railroad or transportation company, or any party affected by any order of the commission, shall be entitled to receive one certified copy of such order, free of charge, and additional copies will be furnished to any persons desiring the same at the actual cost of transcription.

RULE XXVIII

The noun "person" and the pronoun "his," wherever they occur in these rules, shall be construed to include corporations and firms, the singular and plural, the masculine, feminine and neuter genders.

RULE XXIX

These rules shall be in force on and after the fifteenth day of May, 1907. They may be amended at any meeting of the commission, and amendments so made shall go into effect sixty days thereafter.

FORMS

No. 1—Complaint

No. 3—Demurrer

No. 2—Answer

No. 4—Subpena

These forms may be used in cases to which they are applicable, with such alterations as the circumstances may render necessary:

BEFORE THE RAILROAD COMMISSION OF NEVADA Complaint

.....
 against
 The Railroad Company

.....
 The complaint of the above-named
 respectfully shows:

1. (State occupation and place of business.)

.....
 2. That the above-named railroad company is a common carrier, engaged in the transportation of persons and property by railroad between points in the State of Nevada and that, as such common carrier, said railroad company is subject to the provisions of Chapter 45 of the Nevada Statutes of 1907.

3. That (here state concisely the matters intended to be complained of, numbering each succeeding paragraph).

.....
 Wherefore, petitioner prays that the aforesaid railroad company be required to answer the charges herein and that after due hearing and investigation an order be made commanding said railroad company to cease and desist from said violations of the acts referred to in said petition, and for such other and further order as the commission may deem necessary and just in the premises. (Prayer may be varied so as to ask for the ascertainment of lawful rates or practices, and an order requiring the carrier to conform thereto. If reparation for any wrong or injury be desired, the petitioner should state the nature and extent of the reparation he deems proper.)

.....
 Petitioner.

BEFORE THE RAILROAD COMMISSION OF NEVADA
Answer

.....
 against

The Railroad Company

The above-named defendant, for answer to the complaint in this proceeding, respectfully states:

1. That (here follow the usual admissions, denials, and averments. Continue numbering each succeeding paragraph).

Wherefore, the defendant prays that the complaint in this proceeding be dismissed.

The..... Railroad Company,
 By E. F. (Title of officer.)

Demurrer

In usual form, and entitled same as complaint and answer.

BEFORE THE RAILROAD COMMISSION OF NEVADA
Subpena

To.....

.....

You are hereby required to appear before..... in the matter of a complaint of....., on the..... day of....., 191..., at..... o'clock..... m. at....., and bring with you then and there.....

Dated.....

[Seal]

.....
 Commissioner.

.....
 Attorney for.....

PART II

**Containing Report of Public Service Commission for
1913, Public Service Commission Law and
Rules, and Index for Both Reports**

STATE OF NEVADA

THIRD ANNUAL REPORT

OF THE

**Public Service Commission
of Nevada**

1913

H. F. BARTINE - - - - - Chief Commissioner
J. F. SHAUGHNESSY - First Associate Commissioner
W. H. SIMMONS - Second Associate Commissioner
E. H. WALKER - - - - - Secretary
W. K. FREUDENBERGER - - - - Chief Engineer



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1914



THIRD ANNUAL REPORT

OFFICE OF THE
PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, March 20, 1914.

HON. T. L. ODDIE, *Governor of Nevada.*

SIR: Pursuant to law, the Public Service Commission makes this, its third annual report. As in the case of the report of the Railroad Commission, this report has been unavoidably delayed, and in order that the public may be fully informed as to its work up to the present time it will be made to cover some matters of importance that have transpired since the close of the year 1913, although in general the report is intended to apply to the business of the Commission for the calendar year last mentioned.

The work of the Commission has grown very much since its last annual report was filed. The results of that work have more than justified the creation of the Commission and the predictions made in its earlier reports. The work is complex in the extreme, and, as has been previously intimated, in some ways it affects the people as a body more immediately and directly than does the work of the Railroad Commission itself.

No town home can be considered really modern unless it is equipped with electric lights or gas, or both, together with an adequate supply of good wholesome water. In cities a good and sufficient sewerage system is equally important in its bearing upon sanitary conditions and the resulting comforts of the home. Of all these matters the Public Service Commission has jurisdiction. But, beyond this, electric power has to a very great extent supplanted fuel, whether it be wood or coal or gas. The reason is that electric power can be generated at great distances from the points at which it is to be used, and frequently by water power, which is comparatively inexpensive. The Public Service Commission also has jurisdiction of power plants within the State, whether those plants be operated by water, by electric current or by some form of fuel. The importance of all this should be perfectly obvious without any reference to details.

During the year 1913 twenty-seven cases were filed with this Commission, some of them formal and some informal. A detailed statement of these cases will follow later in this report. The more important opinions and orders will be given in full and also the decisions of the court in cases where the orders have been contested. There are, however, a few of such importance as to merit particular mention in this introductory portion of the report.

THE CARSON CITY WATER CASE

Numerous complaints had been made to the Commission of the inadequacy of the water pressure in Carson City. It was claimed that in some parts of the city the pressure was not even sufficient to carry the water by gravity to the second story, and that at times, in some

places, it would scarcely run into the first story. For the purpose of fire protection it was claimed to be wholly inadequate. The Commission took up the matter upon its own motion and, through its engineer, acting in conjunction with the members of the Carson Fire Department and also representatives of the water company, made a thorough investigation. The result was such that the Commission ultimately made an order requiring the water company to lay an additional 7-inch main parallel with the old one, for about 8,000 feet of the distance between the reservoir and the distributing system of the city. Dissatisfied with this decision, the water company applied for a rehearing, which was granted. The second hearing was more thorough and exhaustive than the first. It did not, however, change the convictions of the Commission, and the order as made was reaffirmed, but with the additional provision giving the water company the option of laying a new 12-inch pipe in lieu of the 7- and 8-inch piping now constituting a portion of the company's main extending from the reservoir to the distributing system within Carson City, the said 7- and 8-inch piping constituting the lower portion of the main and immediately connecting with the distributing mains. Subsequently the Commission was notified that the water company was about to conform to the order by laying a 7-inch main. It was suggested to the Commission that, if permitted to do so, the company would lay a 10-inch main parallel to the old one for the distance covered by the 7- and 8-inch piping now in place. This seemed to the Commission even better than the original order, and the water company was duly notified that the laying of such 10-inch main as described would be accepted by the Commission as a compliance with the order. As this report is being written, the Commission is informed that the water company has ordered the pipe and that the work of laying it will soon begin.

It is probable that, in order to make the water system what it should be, some changes will have to be made in the distributing pipes within the city, but this is a matter which can be taken up later. It is believed that the laying of a 10-inch main will be found to work a very great improvement upon the conditions that have prevailed for some years past.

The following opinions and orders contain a sufficiently full history of the case as far as it has gone:

[Case U 42]

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION, *Complainant*,

v.

CARSON WATER COMPANY, *Respondent*.

Appearances:

Mr. H. F. Bartine, Chief Commissioner and Chairman;
Mr. J. F. Shaughnessy, First Associate Commissioner;
Mr. W. H. Simmons, Second Associate Commissioner;
Mr. J. Poujade, Mayor of the City of Carson;
Mr. Geo. Gillson, City Trustee;
Mr. E. B. Yerington, Secretary of Carson Water Company;
Mr. F. A. Cushing, Superintendent Carson Water Company.

OPINION

By the Commission:

This proceeding was brought by the Commission upon its own motion because of numerous informal complaints that had been made of the water service fur-

nished by the respondent company, with reference to both quantity and pressure. The body of the citation reads as follows:

To the Above-Named Respondent, Greeting:

You are hereby notified that numerous informal complaints have been made to this Commission charging that you are furnishing an inadequate supply of water for domestic purposes, including irrigation of lawns and trees, and also that the pressure is wholly inadequate for fire protection. This Commission has therefore decided to take the matter up on its own motion and fully investigate the same. You are further notified that said investigation will begin at the office of the Commission at Carson City, Nevada, on Monday, May 26, 1913, at 11 o'clock a. m. of said day, at which time and place you are directed to appear and make such showing as you may desire with respect to the subject-matter of said investigation.

For your information, and to enable you to prepare such showing as you may desire to make, you will find attached hereto a copy of the report of the Commission's engineer to this Commission respecting the same.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

Dated May 15, 1913.

The matter came on for hearing on May 26, 1913, at 11 o'clock a. m. of said day, at the office of the Commission, in Carson City, Nevada.

The following-named witnesses were sworn and gave testimony: Mr. Walter J. Hunting, superintendent of the Carson High School; Mr. W. H. Murray, janitor of said school; Miss Felice Cohn; Mr. William McMillan; Mrs. Bertha Cohen, and Mr. W. K. Freudenberger.

In addition to the regular witnesses, Hon. J. Poujade, Mayor of Carson City, Mr. Geo. Gillson, Trustee of said city, Mr. E. B. Yerington, secretary of the Carson Water Company, and Mr. F. A. Cushing, superintendent of said water company, also made statements relative to the water situation and the operations of the respondent company.

The testimony very clearly brought out the fact that the season had been an unusually dry one up to that date, and that, considering merely the supply of water for household, irrigation and fire purposes, the existing conditions could hardly be considered as representing fairly the average conditions. Since the date of the hearing copious rains have fallen and the supply of water has been very materially increased. The Commission is not at this time prepared to say that the supply for general purposes is greatly inadequate, although a larger supply would be an undoubted advantage to Carson City.

But the question of pressure for fire purposes is a far more serious one, and in certain parts of the town it is serious even with respect to strictly domestic service. For example, upon the high ground north of the railroad, where the land rises rather abruptly from twenty to twenty-five feet, it frequently happens that the pressure is insufficient to even carry the water into the first floor of the houses for domestic purposes. The testimony of the witnesses showed that at certain times during the day it was impossible to get water for a bath, and almost impossible to get a sufficient supply for ordinary ablutions and culinary purposes. The testimony of witnesses Hunting and Murray showed that at all times at the High School Building the pressure was insufficient to carry the water properly into the second story, and that in case of fire the pressure was altogether insufficient.

The foregoing statement indicates to this Commission that the water company, respondent, should make strong efforts to increase the supply of water for all purposes. We understand that it is not an easy matter to develop an additional supply by tunneling or otherwise, although in view of the geographical, the topographical, and the climatological conditions obtaining upon the mountain range west of Carson City, it does not seem to even border upon the impossible. It has been brought to the attention of the Commission, and discussed with the respondent company, that a very considerable addition to the respondent company's water supply might be obtained upon very reasonable terms by tapping the line of the Virginia and Gold Hill Water Company with, say, a 4-inch main. The Virginia and Gold Hill Water Company referred to is entirely willing that such connection may be made, and, apart from the cost of laying the pipe, which would not be great, it is willing to leave the measure of compensation for the water furnished to the judgment of this Commission. This judgment, it may

be said in passing, would be ultraconservative, because the quantity of water necessary to reinforce the present supply of the Carson Water Company would be comparatively small, and could be easily spared by the Virginia and Gold Hill Water Company.

As above indicated, the greatest trouble, and the most serious feature of the situation, is the lack of pressure. In view of the fact that the water company's reservoir is at an elevation of 200 feet or more above the greater portion of Carson City, it is obvious that, with an adequate main and distributing system, there should be no lack of pressure. Hence the deficiency of pressure must be attributed to deficiency in the main and the distributing pipes.

Since the hearing and since the heavy rains heretofore mentioned, pressure tests have been made by the Commission's engineer, acting conjointly with Mr. Cushing, the respondent company's superintendent. The result of these tests is very far from satisfactory. It is not necessary in this opinion to go into details with regard to the pressure at various points within the city, where the hydrants are located.

In general it may be stated that under insurance requirements the water system of a city located and situated as is Carson City the pressure should be not less than sixty (60) pounds with four streams running at the same time, the hose nozzles to be not less than an inch and an eighth, which is regarded as standard. The tests by the Commission's engineer on July 29 show hydrant pressures ranging from 14 pounds to 57½ pounds, the latter pressure being obtained only when a single small stream was flowing. The Commission is not at all disposed to require of the company the maintenance of a pressure that would be regarded as adequate and necessary in a large city. The fact is recognized fully that to some extent Carson City is protected from fires by its wide streets and its abundance of trees frequently separating one building from another. Upon Carson Street, however, where the business houses are located, and which, by the way, are nearly all on the west side of the street, the city is dependent entirely upon the water supply for protection from fires.

Under the circumstances the Commission cannot do otherwise than find, as a matter of fact, that the water pressure as furnished by the respondent company is inadequate; that it is inadequate much of the time even for effective irrigation and domestic use throughout the city as a whole, and still more so for fire purposes.

Carson City is the capital of the State. It contains about 2,500 people. There is very little poverty in the city. Practically every water user is able to pay for the water used, and, so far as the Commission is advised, the company is not subjected to any material losses upon that head. There is nothing to indicate that there will be at any time, for many years to come, any reduction of the water company's business in Carson City. While it cannot be affirmed that the city will enjoy very much progressive growth, it is, in the fullest and broadest sense of the expression, a permanent town, with the chances in favor of a steady, if not very rapid, increase in population and business. Consequently there is no reason to suppose that there will be a material, or in fact any, falling off in the business of the water company; but, on the contrary, it is reasonable to anticipate a moderate increase, and this for an indefinite period of time. Under such circumstances the Commission can see no reason why the respondent company should not make a reasonable effort to increase the water pressure. This being done, it will of course serve the double purpose of giving better fire protection and making a better service for all other uses. Any expense incurred for this purpose will be in the nature of a permanent investment. It will not be necessary to be constantly repeating upon it, but the essential improvement once made will suffice for a great many years to come.

The sworn reports of the company on file in this office show that it is doing a healthy and remunerative business; that in fact it is realizing a good fair return upon the full value of its investment, and there is no reason to doubt that it will continue to do so after all necessary improvements shall have been made, even including the acquisition of an additional supply of water from the Virginia and Gold Hill Water Company, as above stated, or from any other source as the respondent company may prefer.

It is the opinion of this Commission that, for the purpose of securing the additional pressure reasonably necessary, another main should be constructed, beginning at the line of Carson Street either at or north of Robinson Street, and extending westward along the line of the street selected for such service a distance of approximately 8,000 feet, where it should connect with the present main of

the respondent company. This additional main should be not less than 7 inches in diameter. It should also be connected on the north with the mains now extending northerly upon Curry and Nevada Streets. The laying of this additional main would considerably diminish the loss of pressure by friction, and in the opinion of the Commission it would very greatly improve the water situation in Carson City from every viewpoint.

In conclusion the Commission very strongly urges the respondent company to make all reasonable effort to increase its supply of water. Whether it be by connection with the main of the Virginia and Gold Hill Water Company, or by some other method which appeals more strongly to the respondent company, is a matter which the Commission is entirely willing to leave with the respondent herein, because there is no desire to be arbitrary or overexacting. The wish of the Commission is, without injustice to the respondent company, to give to the people of Carson City the very best water service that circumstances and conditions will permit.

But it is believed to be imperatively necessary that something should be done to secure a better pressure to meet the conditions hereinbefore mentioned, and therefore the Commission is of opinion that an order should be entered requiring the respondent company to lay an additional 7-inch main as hereinbefore set forth.

ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA, August 16, 1913.

In regular session.

Present—Chief Commissioner Bartine, First Associate Commissioner Shaughnessy, Second Associate Commissioner Simmons, Secretary Walker.

Pursuant to the foregoing opinion, it is

Ordered, That the Carson Water Company, the respondent above named, proceed with all reasonable diligence to lay an additional water main not less than 7 inches in diameter, beginning at Carson Street in Carson City, Nevada, at the intersection of said Carson Street with Robinson Street, or some other street north of said Robinson Street, and extending westward along said Robinson Street, or such other street north of said Robinson Street as may be selected by said company, and beyond the city limits of said Carson City, a distance of eight thousand (8,000) feet, and to be properly connected with the present main of said respondent company now leading from the reservoir of said company down to and into Carson City for the distribution of water; and, further, that at Curry Street and Nevada Street, in said Carson City, suitable connections be made with the lateral mains running northward from said additional main hereinbefore ordered to be constructed. It is further

Ordered, That said work shall be begun within the period of sixty (60) days from the date of the formal promulgation of this order, and that it be prosecuted with due diligence to completion.

H. F. BARTINE,

Chief Commissioner,

J. F. SHAUGHNESSY,

First Associate Commissioner,

W. H. SIMMONS.

Second Associate Commissioner.

Attest: E. H. WALKER, *Secretary.*

OPINION AND ORDER ON REHEARING

BARTINE, *Chief Commissioner:*

After full investigation and hearing, the original order in this case was filed on August 16, 1913.

The order made on the date mentioned reads as follows:

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA, August 16, 1913.

In regular session.

Present—Chief Commissioner Bartine, First Associate Commissioner Shaughnessy, Second Associate Commissioner Simmons, Secretary Walker.

Pursuant to the foregoing opinion, it is

Ordered, That the Carson Water Company, the respondent above named, proceed with all reasonable diligence to lay an additional water main not less than 7 inches in diameter, beginning at Carson

Street, in Carson City, Nevada, at the intersection of said Carson Street with Robinson Street, or some other street north of said Robinson Street, and extending westward along said Robinson Street, or such other street north of said Robinson Street as may be selected by said company, and beyond the city limits of said Carson City, a distance of 8,000 feet, and to be properly connected with the present main of said respondent company now leading from the reservoir of said company down to and into Carson City for the distribution of water; and, further, that at Curry Street and Nevada Street, in said Carson City, suitable connections be made with the lateral mains running northward from said additional main hereinbefore ordered to be constructed. It is further

Ordered, That said work shall be begun within the period of sixty days from the date of the formal promulgation of this order, and that it be prosecuted with due diligence to completion.

H. F. BARTINE,

Chief Commissioner,

J. F. SHAUGHNESSY,

First Associate Commissioner,

W. H. SIMMONS,

Second Associate Commissioner.

Attest: E. H. WALKER, *Secretary.*

The respondent company, being dissatisfied with the foregoing order, applied for a rehearing, which was granted, and such rehearing took place at the office of the Commission, in Carson City, Nevada, on November 29, 1913.

At this rehearing the respondent company was represented by Mr. Frank Murphy, attorney; Mr. F. A. Cushing, superintendent, and Mr. G. D. Smith, civil engineer, who gave testimony as an expert witness. The rehearing was as full and complete as the respondent company desired, and it was understood and agreed at such rehearing that the testimony taken at the original hearing and all the records on file in the office of the Commission, bearing upon the questions involved in the case, should be considered as a part of the record in this case.

The Commission sees no reason to change, materially, the views expressed in the former opinion, although the developments at the rehearing make it advisable that there should be some modification of the former order.

The testimony given on behalf of the respondent, taken by itself, shows satisfactorily to the Commission that the pressure in the respondent company's pipes, for domestic use and fire purposes, is insufficient. The respondent company, through its witnesses, practically admitted such to be the case. In view of the fact that the respondent company objected so strongly to the former order made in the case, it was but natural that the Commission should endeavor to ascertain if the company itself, conceding the insufficiency of the pressure, had any counter-proposition to make. The only suggestions which the company had to offer in the line of improvement were that it would be advisable to introduce the meter system, and also that the pipe lines constituting the distributing system within the city of Carson should be so connected as to make what is termed a "circulating system." That is to say, the mains traversing the principal streets should be so connected by transverse pipes that one might reinforce another.

This Commission can interpose no objection to the establishment of a meter system by the respondent company, if it desires to do so. The meter system is recognized all over the country as a legitimate method of determining the quantity of water supplied to each patron, and, consequently, what its just and reasonable charges should be.

As to the proposed circulating system, the Commission will not, at this time, make an order, but will leave that phase of the case open for future consideration. If it becomes necessary to take it up again, the Commission will then express itself fully with respect to it, and will also present its views as to the extent to which the municipal authorities of the city of Carson should contribute, if at all, toward the construction of such system.

For the present, however, the Commission is disposed to confine its order to the ground covered by the original one, and to simply require an improvement of the main pipe line, or lines, leading from the reservoirs of the respondent company down to the distributing system within the limits of the city.

In our former hearing, as it will be seen, we required the respondent company to lay, for a certain distance, parallel with the present main line a new and additional main of not less than 7 inches in diameter.

After the close of the rehearing, it was stipulated and agreed that the engineer of the respondent company and the engineer of the Commission might confer together, and report in writing, either separately or jointly, the result of any subsequent investigations and checking which they might make.

The Commission's engineer, Mr. W. K. Freudenberger, has made a further report with respect to the subject-matter of this investigation. In that report he says:

Since I made my last report on this case, the water company has had an engineer check the lengths of the different sizes of pipe in the transmission mains, and he found them to be very different from the lengths given in their report, and which I used in my estimates. The correct lengths as found by the check are as follows:

12-inch pipe.....	885 feet	
10-inch pipe.....	673 feet	
9-inch pipe.....	1,079 feet	
Making a total of.....		2,637 feet
8-inch pipe.....	1,750 feet	
7-inch pipe.....	6,730 feet	
A total of these sizes of.....		8,480 feet

A grand total length of..... 11,117 feet

According to the testimony of Mr. Cushing, which I believe to be correct, it will be necessary to replace all of this pipe very soon, because it is practically worn out. I have therefore calculated what size pipe should be put in to replace the smaller sizes, namely the 7-inch and 8-inch pipe. Assuming a use of 1,000 gallons per minute, which would be sufficient for fire purposes only, it will be necessary to put in 8,480 feet of 12-inch pipe to replace the 7-inch and 8-inch pipe in order to maintain good hydrant pressure. With this improvement, the pressure at the Arlington Hotel hydrant would be 80 pounds, or a little more, when 1,000 gallons per minute are being used. This would give very good service, as far as the transmission line is concerned.

It is true, as our engineer remarks in the foregoing, that Superintendent Cushing of the water company did testify that at some time in the near future—say, a year and a half or two years hence—nearly, or quite all, of the transmission line of the respondent company, from its reservoirs to the distributing system in Carson City, would have to be replaced. It appears that the line was originally laid about thirty-nine years ago, and also, more specifically, that when portions of it were taken up it was found to be badly worn, corroded, and rusted. Whether the prospective life of the pipe line has the exact limit Mr. Cushing placed upon it, is not material. It is clear that in the comparatively near future it will all have to be replaced with new pipe. The report of our engineer, Mr. Freudenberger, indicates that if the old pipe, rusted and worn as it is, be replaced with a new main 12 inches in diameter, a very large percentage of the present friction will be removed, thereby greatly increasing the pressure of the water where the main connects with the distributing system of Carson City.

In view of the fact that the main now in place must be very soon renewed, it does not appear to the Commission that it will be good business policy for the company to lay an additional 7-inch main parallel with the old one; because one 7-inch main line by itself would not be sufficient to meet the requirements of the situation and, when the old one gives out, it will be necessary for the company to replace that likewise. It therefore seems to the Commission to be in every way more advisable for the company to lay a 12-inch main for the distance of 8,480 feet, the distance now covered by the 8-inch and 7-inch pipe, and constituting a portion of the main leading from the reservoirs to the distributing system of the city.

The report, and also the testimony of our engineer at the rehearing, with regard to the benefits to be derived from the laying of a new 12-inch main in lieu of the 7-inch and 8-inch pipe now in use, are, as we view it, borne out by the testimony of Mr. G. D. Smith, the respondent company's expert witness. That witness admitted that the laying of a larger main would check the velocity of the flow of the water, and, in that way, lessen the friction; at two or three points in his testimony that admission was made, and it is directly in line with the views expressed by our own engineer, both as a witness upon the stand and in his report to this Commission.

As already intimated, it does not seem to the Commission that it would be wise, as a business proposition, for the respondent company to lay a 7-inch main in conformity with the original order, and one, two, or three years hence be obliged to lay a larger main in lieu of the one now in use. By far the better proposition for the company, viewed from a financial standpoint, and, as we think, a better remedy, will be to lay a 12-inch main as herein suggested for a distance of 8,480 feet of the main which now consists of 8-inch and 7-inch pipe.

In this connection it is proper to observe that there was really very little difference between the testimony given by the respondent company's witness, Smith, and the views expressed by our own engineer. They were agreed that the larger main, substituted for the 7-inch and 8-inch pipe now in use, would materially diminish the friction, and consequently give increased pressure at the point where the main from the reservoirs connects with the distributing system of the city. About the only difference seemed to be that the company's engineer thought that a 10-inch main would be ample. Our own engineer did not directly controvert this, but was of the opinion that, while a 10-inch main *might* suffice, a 12-inch main would be better, and would certainly be adequate for many years to come.

The cost of laying a 12-inch main would very considerably exceed the cost of the laying of the 7-inch main referred to in the original order in this case, but it must be borne in mind that the larger main will have to be laid within a comparatively short time anyway, and if the 12-inch main be laid now, it will be unnecessary to put in the 7-inch main, and that item of expense will be saved. The Commission is of the opinion that by far the better course for the company to pursue will be to lay a 12-inch main in lieu of the 8-inch and 7-inch pipe now constituting a portion of the main from the reservoirs to the city. The life of such a pipe will be anywhere from thirty to forty years, and, the improvement once made, in all probability it will not have to be done over again during the lifetime of any one now interested in the water company and its business affairs.

We deem it proper to go a step further, and say that, with regard to the prospective life of the main now in use, the judgment of our engineer fully coincides with the testimony given by Superintendent Cushing, and the Commission can see no reason to doubt that within the next two years, at the outside, the greater portion, if not the whole, of the respondent company's main between the reservoirs and Carson City will have to be replaced with new pipe. Our engineer estimates that the cost of laying 8,480 feet of 12-inch main will be \$12,000. This is only a little more than one year's net profit for the company. In view of the fact that the main has been in use for about thirty-nine years, during which time the expense of maintenance must have been comparatively small, the Commission cannot regard an expenditure of \$12,000 for the laying of a new 12-inch main as an excessive burden for the respondent company to bear, and especially not, in view of the fact, repeatedly herein adverted to, that the expenditure of something approximating it will have to be made anyway within the next two or three years.

It is not necessary for the Commission to enlarge upon what was said in its former opinion upon the subject of the permanency of Carson City. There is no reason to doubt that for a great many years to come it will be a permanent community, fully as large as it is now, and with every reasonable probability pointing to a moderate, but steady, increase of population which would mean additional business for the water company.

We feel, therefore, that the original order in this case should be affirmed, but, subject to the condition that, if the company so desire, instead of laying a 7-inch main, as prescribed by such order, it may at its option, lay a 12-inch main to take the place of the 8-inch and 7-inch pipe now constituting the lower portion of the main from the reservoirs to the distributing system in Carson City.

An order should be entered in conformity with the views herein expressed.

ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA, January 3, 1914.

In regular session.

Present—Chief Commissioner Bartine, First Associate Commissioner Shaughnessy, Second Associate Commissioner Simmons, and Secretary Walker.

Pursuant to the foregoing opinion, it is hereby

Ordered, That the order made in this case on the 16th day of August, 1913, be affirmed, subject to the following conditions and modifications, viz:

The Carson Water Company, respondent, is hereby specifically authorized, at its election, to lay a 12-inch main in lieu of the 7-inch and 8-inch piping now constituting a portion of the respondent company's main extending from the reservoirs to the distributing system within Carson City, the said 7-inch and 8-inch piping constituting the portion of said main nearest to said Carson City, and being approximately 8,480 feet in length. The laying of such 12-inch main, with all proper and necessary connections, will be regarded as a sufficient compliance with the requirements of both orders made in this proceeding, and the respondent company will be deemed and considered as relieved from the necessity of laying the 7-inch main as originally ordered. It is further

Ordered, That the matter of improving the circulating and distributing system of the respondent company within the limits of Carson City be left open for future consideration. It is still further

Ordered, That the work of laying the new main herein provided for, whether the company shall elect to lay a 12-inch main or a 7-inch main, shall be begun within ninety days after the promulgation of this order, and be prosecuted with due and reasonable diligence, to completion.

[SEAL]

Attest: E. H. WALKER, *Secretary*.
Dated January 12, 1914.

H. F. BARTINE,
Chief Commissioner,
J. F. SHAUGHNESSY,
First Associate Commissioner,
W. H. SIMMONS,
Second Associate Commissioner.

THE TONOPAH WATER CASE

Greater in importance in its financial aspect is the case involving water rates and fire protection in the town of Tonopah.

This proceeding was also brought upon the Commission's own motion, but was induced by the complaint filed with the Commission by the grand jury of Nye County. The complaint was that the rates were excessive and the fire protection inadequate. The hearing was held at Tonopah before Commissioners Shaughnessy and Simmons. The testimony was voluminous, but was mainly directed to showing that the pressure for fire purposes was insufficient. There was, however, considerable testimony tending to show that the city appliances for fire-fighting were insufficient; that the hydrants were too far apart; that the fire department was poorly organized and equipped, there being a lack of helmets, suitable hose, and other paraphernalia. It did not appear that, as a whole, the city had suffered greatly from fires, only one or two of any considerable magnitude being referred to in the testimony. Under the law, the Commission could not make an order requiring the company to build additional reservoirs and install tanks specially for fire purposes without allowing a fair and reasonable compensation therefor. The testimony being more or less uncertain as to where the burden of responsibility lay for inadequate service at recent fires, the Commission did not feel that it was in a position to make an order requiring the company to incur heavy expense for the purpose of providing more water or stronger pressure.

Upon the subject of rates very little testimony was offered, and the Commission was obliged to make large use of its own knowledge of water rates in general, together with such official records on file as could be lawfully used in rendering a decision. The conclusion of the Commission was that, measured by any fair standard or test, the water rates charged were clearly excessive. Consequently an order was made providing for a very considerable reduction.

The water company applied for a rehearing, which was granted. This took place in the Commission's office at Carson City, all members being present. The result was that the original order was confirmed. The

effect of the order was to reduce the revenue of the company about \$18,000 a year, which, of course, meant a corresponding saving to the consumers. This saving to a very large extent affected the smaller consumers using the water for household and domestic purposes.

The water company contested the order in the United States District Court for the District of Nevada, filing a bill in equity alleging that the rates as prescribed were confiscatory, and consequently that the order was void. A temporary injunction was asked for pending the trial. A hearing on the motion for the preliminary injunction took place August 18, 1913, before Circuit Judge Morrow sitting for Judge Farrington, who was absent. The case for the Commission was made up in its own office with no outside help whatever. Upon the hearing the argument was made on behalf of the Commission by Chief Commissioner Bartine, but associated with him were Attorney-General Geo. B. Thatcher and Mr. J. A. Sanders, District Attorney for Nye County.

At the conclusion of the argument Judge Morrow immediately rendered his decision upon the motion. The restraining order previously issued was discharged and the motion for a temporary injunction was denied. The case for the Commission was very much strengthened by an admirable affidavit made by Mr. W. K. Freudenberger, the Commission's engineer. In view of its very instructive nature, that affidavit will be reproduced in this report as a part of the record of this important case. It is gratifying to the Commission to know that its position, both in law and upon questions of fact, was so well sustained by the court. Judge Morrow's decision followed very closely the contentions made on behalf of the Commission.

The water company, having lost its preliminary motion, promptly applied the rates prescribed by the order, and the people of Tonopah have been in full enjoyment of the lower charges ever since.

Following are the opinions and orders of this Commission, the Freudenberger affidavit, and the decision by Judge Morrow, all of which, it is believed, will be interesting and instructive reading to the public:

[Case No. 20]

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION OF NEVADA, *Complainant*,

v.

WATER COMPANY OF TONOPAH, *Respondent*.

Hearing September 26, 1912, to September 30, 1912, inclusive.

Appearances:

J. A. Sanders, District Attorney, for the People of Tonopah.

H. R. Cooke, for Respondent Company.

OPINION AND ORDER

BARTINE, *Chief Commissioner*:

This proceeding was brought by the Commission upon its own motion, such action having been induced by a complaint filed with the Commission by the grand jury of Nye County, Nevada. There were no formal pleadings, but the ground to be covered by the investigation was made sufficiently clear by the citation, which reads as follows:

BEFORE THE PUBLIC SERVICE COMMISSION OF NEVADA

The Public Service Commission of Nevada, *Complainant*,

v.

Water Company of Tonopah, *Respondent*.

NOTICE AND CITATION

To the Above-Named Respondent, Greeting:

The grand jury of Nye County, Nevada, having complained to this

Commission of the service rendered by you, in the matter of supplying the town of Tonopah, Nye County, Nevada, with water, this Commission has determined to investigate, upon its own motion, the subject-matter of said complaint.

The complaint, in substance, is that you have failed, and do now fail, to furnish adequate fire protection to the citizens of said town, in that the water pressure is insufficient for the extinguishing of fires.

Further, that the charges for water are excessive and exorbitant.

Further, that the rates charged for such water are unreasonable and unjustly discriminatory, in that you charge some individuals, partnerships, mercantile companies, and corporations a higher rate than you do other corporations, companies, and individuals.

Further, that you are practicing discrimination in furnishing water to consumers, without regard to whether the premises are occupied or unoccupied, and charging the same rates per month in either case.

Further, that the minimum rates charged for water are excessive and unreasonable.

You are therefore formally cited to meet the charges complained of, by filing such answer as you may desire to, with this Commission, within twenty (20) days after the receipt hereof.

The investigation will also be made to cover all of your practices and regulations in connection with the service.

Should you not desire to file a formal answer, you may notify this Commission to such effect, and a date will then be set for the hearing, at which hearing you will be given full opportunity to appear and make such showing as your interests may require.

This proceeding will be had under subdivision b, section 19, of what is known as the Public Service Commission law of this State, approved March 23, 1911.

PUBLIC SERVICE COMMISSION OF NEVADA,

Dated August 12, 1912.

By E. H. WALKER, *Secretary*.

At the opening of the hearing the respondent company made oral answer, denying all the averments contained in the citation. The hearing took place in the town of Tonopah, Nevada.

The writer of this opinion was not present at the hearing, which was conducted by First Associate Commissioner Shaughnessy and Second Associate Commissioner Simmons. Consequently, the Chief Commissioner's view of the case is based entirely upon the evidence adduced at the hearing, coupled with the sworn reports of the respondent company on file and of record in the office of the Commission.

At the hearing it was claimed by the respondent company that it had no franchise, and the claim was not disputed. This, in our judgment, is immaterial for the purposes of the case in hand. The water company is clearly a public utility, and, while it may not have what is technically known as a franchise, it has what is very much better, a practical monopoly of the water supply available for use in the town of Tonopah. The right to regulate a public utility does not depend upon whether it has a franchise. If it is a public utility, that settles the question and makes it subject to just and reasonable regulation by a commission lawfully authorized. The fact that town authorities might prohibit the company from laying its pipes through the streets, or compel said company to take up those that are already laid, cuts no figure in this case. There is not the slightest probability, so far as the evidence discloses, of anything of the kind being done. The conditions are such that it will be impossible for the town to dispense with the water service. If at any time such contingency should arise, of course a new question will be presented. We can only deal with the conditions as they now exist, and, as we regard it, there can be no question that the water company is a public utility and fully under the jurisdiction of the Public Service Commission of this State.

This case presents three distinct phases: First, the question of fire protection; second, the matter of discrimination; and, third, the reasonableness of the rates charged.

With respect to the question of fire protection, the Commission is constrained to say that the evidence offered was not sufficiently clear, or so full and satisfying, as to justify an order at this time that the respondent company furnish additional facilities, including higher pressure for fire purposes.

The Commission feels, therefore, that no order should be made at this time with respect to the construction of an additional reservoir for fire-fighting pur-

poses, but that this phase of the case should be left open for further investigation and determination. This course will, accordingly, be pursued.

DISCRIMINATION

Upon the subject of discrimination there was little or no definite testimony given at the hearing. It appears that some of the patrons of the respondent company are charged more and others less, but there was no explanation of why it was so. The records of this office, however—that is to say, the schedules of the respondent company—show marked and apparently inexcusable differentiations in the charges, which are clearly discriminatory. But, in view of the conclusions reached by the Commission, it is not necessary to deal specifically with those discriminations at this time, because it is believed that they will be in a large measure removed by the order to be made in this case. Later on, should it appear that there are individual cases of discrimination, the party or parties suffering therefrom will, upon complaint made, have a full hearing at the hands of the Commission with reference to such alleged discriminations.

REASONABLE RATES

The question of the reasonableness of rates charged to commercial and business houses and to private residences is, under the showing as thus far made, the striking and important feature of the case. The testimony given at the hearing, coupled with the schedules filed by the respondent company, clearly indicates that, measured by any fair standard, the rates charged by respondent company in the town of Tonopah are not only excessive, but largely so. We have searched the records of this office in vain for any schedule of charges as high as those now in effect within the town of Tonopah, under similar conditions. The present rates are, in fact, so disproportionately high that, to bring them down to what appears to be reasonable, seems like a tremendous cut. However, we are forced to the conclusion that the rates, as set forth in the schedule annexed to the order in this case, will not only yield the respondent company a very substantial return upon the value of the property employed in the service, but at the same time be entirely reasonable and fair when determined by any standard known in the regulation of rates to be charged by public utilities.

The schedule of rates prescribed by the order to be made herein is by no means based entirely upon the fact that it will yield to the company a fair return upon the value of the property. We have considered it in every light and have taken into consideration all the elements which enter into the determination of what may be considered reasonable rates. We have considered the value of the property employed, according to our best intelligence and in line with the principles adopted by courts and commissions. We have credited to respondent a valuation that we believe is enough to cover the entire property used in the performance of the service now under review. We have allowed an ample percentage for depreciation, in view of the claims and contentions that Tonopah, being a mining camp, has not the same assurance of long life as a city or town that is located in the midst of a rich agricultural section. We have not felt justified in accepting the estimates of some of the witnesses that the town will not last more than ten years. As has been well stated by the Supreme Court of the United States, in the case of Wilcox against the Consolidated Gas Company, in 212 U. S., such estimates can never be taken at their face value because of the uncertainties involved. In this case the testimony tending to show that Tonopah will probably be a short-lived town is not supported by anything authentic in the way of data; nor do we see how it can be. It is obvious that, as a mining district, Tonopah was never in better condition than it is now. The zone of values has been constantly extended, and, by the simple exercise of their own intelligence, the members of this Commission cannot fail to see that this extension is more likely to continue than are the proved mineral values to shut off abruptly. The members of the Commission, being personally familiar with the conditions existing in the Tonopah district, are quite as capable of forming their own opinion with regard to the probable future life of the camp as are any of the witnesses who gave testimony at the hearing. As we view it, any testimony given in the case, to the effect that the town has not more than ten years to live, is pure guesswork, and we do not feel that we are bound to accept such testimony as in any way conclusive. We cannot see any more reason for believing that the area of mineral values has reached the limit than we can for believing that such area may extend several miles farther in various directions.

Still, upon the basis of the known fact, strenuously claimed in this case, that the tendency of all mining districts is to exhaust, we have carried into the expense

account of the company an item of 5 per cent for the depreciation of the value of the actual tangible property which is susceptible of depreciation, which, by the customary rules of calculation, will reproduce the entire property upon any fair basis of calculation in about fifteen years.

An order will be entered in conformity with these views.

ORDER

Pursuant to the foregoing opinion, on this, the 5th day of April, A. D. 1913, at a regular session of the Public Service Commission of Nevada, *it is hereby ordered:*

That on or before the 10th day of May, A. D. 1913, the Water Company of Tonopah publish and put into effect the schedule of rates following, to wit:

From 1 to 2,000 gallons.....	\$3.25 per 1,000 gallons
From 2,000 to 3,000 gallons.....	\$3.00 per 1,000 gallons
From 3,000 to 5,000 gallons.....	\$2.75 per 1,000 gallons
From 5,000 to 7,500 gallons.....	\$2.50 per 1,000 gallons
From 7,500 to 10,000 gallons.....	\$2.25 per 1,000 gallons
From 10,000 to 12,500 gallons.....	\$2.00 per 1,000 gallons
From 12,500 to 15,000 gallons.....	\$1.75 per 1,000 gallons
All over 15,000 gallons.....	\$1.50 per 1,000 gallons

The charge for any quantity in a given classification shall not exceed the charge which would accrue for the minimum quantity at the next lower rate.

It is further ordered: That water shall be furnished to hospitals at rates not exceeding \$1.50 per 1,000 gallons.

It is further ordered: That water shall be furnished for street sprinkling and volunteer fire service at rates not exceeding \$1 per 1,000 gallons.

It is further ordered: That water shall be furnished for lawn and garden irrigation at rates not exceeding \$1 per 1,000 gallons.

Further: The Commission recommends that the present free rate to churches and schools, up to 500 gallons per month, be continued.

It is further ordered: That the minimum monthly charges shall be:

Commercial use.....	up to 430 gallons at \$1.50
Domestic use, 1- and 2-room houses.....	up to 385 gallons at \$1.25
Domestic use, 3- and 4-room houses.....	up to 615 gallons at \$2.00
Domestic use, all other residences.....	up to 770 gallons at \$2.50

It is further ordered: That the meter deposits shall be:

For residences.....	\$5.00
For commercial consumers, where bills are less than \$5.....	\$5.00
For commercial consumers, where bills are more than \$5.....	\$10.00

The above schedule does not cover mining and milling.

[SEAL]

PUBLIC SERVICE COMMISSION OF NEVADA,

Dated April 5, 1913.

By E. H. WALKER, *Secretary*.

REHEARING

June 20 and 21, 1913

Appearances:

For Respondent, Haven & Athearn, and Mr. W. R. Cooke.

Mr. E. P. Troy appeared and was recognized on behalf of the minority stockholders of the company.

Attorney-General Geo. B. Thatcher was present during the proceeding, and took part therein on behalf of the Commission.

Mr. J. A. Sanders, District Attorney of Nye County, appeared for the people of Tonopah.

All the Commissioners were present in *pro. per.*

OPINION AND ORDER

This rehearing was held upon the formal application of the respondent company, it being alleged in the petition that the Commission, in its original order, had not given due and proper consideration to the question of what constituted reasonable rates to be charged by the respondent company for water used for residential and commercial purposes.

Messrs. Edwin Duryea, Jr., H. L. Haehl, F. A. Burnham, and J. G. Crumley were sworn as witnesses and examined on behalf of respondent. Mr. Geo. B. Thatcher, Attorney-General, was sworn and gave testimony on behalf of the Commission. Mr. E. P. E. Troy, representing the minority stockholders, was sworn as a witness, and also took part in the cross-examination of the witnesses for the respondent.

It does not appear to the Commission that the matter which Mr. Troy brought out and was desirous of bringing out had any material bearing upon the question of reasonable rates, and it is therefore excluded from consideration in the making of this order.

The Commission has given full and careful consideration to the testimony of respondent's witnesses. Messrs. Duryea and Haehl both testified to the value of respondent's plant, including the water right. We are not able to see how the testimony of these witnesses can be given weight that should properly induce this Commission to change the order heretofore made. The estimates of the value of water right were based upon the value of such rights in southern California, where the conditions are widely dissimilar from those existing at Tonopah; so greatly dissimilar, in fact, as to make a comparison almost, if not quite, valueless. On the other hand, the testimony of witness Duryea did show that the structural plant of the respondent company was very greatly depreciated in value as compared with a new plant of the same character and capacity.

The testimony of witnesses Burnham and Crumley was not, in our judgment, of a character to make any difference in the legal status of the case, or to induce the Commission to depart from the order already made.

Mr. Geo. B. Thatcher testified with respect to the value of a water right in Nevada at a point not very far distant from Tonopah and, while the Commission is not inclined to measure the value of the water right of the respondent company by the value of that mentioned by Mr. Thatcher in his testimony, nevertheless, a comparison between these two water rights is more in point than a comparison between a water right in Tonopah and one existing among the orange groves of southern California.

Upon the whole, the Commission is of the opinion that its former order in the premises was just and fair, both to the respondent company and to the people of Tonopah, and such order is hereby reaffirmed, to take effect on the 1st day of August, 1913, the date already fixed, and of which the respondent company has been duly notified.

[SEAL]

By Order of the Commission:

Dated July 26, 1913.

(Signed) E. H. WALKER, *Secretary*.

AFFIDAVIT OF W. K. FREUDENBERGER

State of Nevada, County of Ormsby, ss.

W. K. Freudenberger, being duly sworn, on his oath, says:

That he is the duly appointed, qualified and acting engineer of the Public Service Commission of the State of Nevada, and also the duly appointed, qualified and acting engineer of the Railroad Commission of Nevada.

That he graduated from the Engineering Department of the University of Missouri in 1899, is a member of the American Institute of Electrical Engineers, and an associate member of the American Society of Civil Engineers, two of the most important engineering societies in the United States.

That he has followed the profession of engineering for fourteen years; that he was superintendent of the Electrical Department of the Colorado Fuel and Iron Company of Pueblo, Colo., a \$45,000,000 corporation, for about three years, where he had charge of an electric system costing approximately \$1,000,000, and had charge of the installation of the larger part of the equipment of this electric system.

That he was electrical engineer for the Steptoe Valley Smelting and Mining Company and the Nevada Consolidated Copper Company of Ely, Nevada, for two and a half years prior to his appointment and qualification as engineer of the Public Service Commission of Nevada; that in the said position of electrical engineer of said Steptoe Valley Smelting and Mining Company and the Nevada Consolidated Copper Company of Ely he had charge of an electric plant of a value approximating \$1,000,000, a large portion of which plant he installed.

As engineer of the Public Service and Railroad Commissions of this State, affiant says that he has made complete valuations of the property of a number of water, sewer, and electric companies, and has checked the valuations made by other engineers in other cases, aggregating in value more than \$10,000,000, and that he is competent to testify as to the actual valuation of the properties of the Water Company of Tonopah.

Affiant further says that, acting in his official capacity as engineer of the Public Service Commission of Nevada, he made a careful examination of the properties of the said Water Company of Tonopah used in supplying the city of Tonopah, the inhabitants, and the industries thereof, with water; that as the result of such

examination he finds and states the fact to be that the total value of said plant, exclusive of any estimated value of any water right, which may be claimed by said company, to be the full sum and amount of \$230,027.50.

Affiant further says that he made a careful examination of the lands owned by said Water Company of Tonopah in which the water is developed for the purpose of serving the city of Tonopah, and the inhabitants thereof, with water; that upon said lands there are no running streams, but that the water is entirely percolating and is developed by means of wells, with suitable pumping appliances and pipe lines for the conveyance of the same to the city of Tonopah and the Tonopah mining district; that, as affiant understands it, there is no water right owned or controlled by said Water Company of Tonopah; that the only water owned or controlled by said company is the percolating water hereinbefore referred to, which is gathered and concentrated in wells and subsequently pumped into pipe lines and conveyed to the city of Tonopah and the Tonopah mining district.

Affiant further says that, according to his best judgment and belief, the said Water Company of Tonopah owns no water right separate and apart from the land containing the said percolating waters, and upon which any separate valuation can be placed.

Affiant further says that in his office, as engineer of the Public Service Commission of the State of Nevada, he has full access to and is familiar with the annual and monthly reports of the said Water Company of Tonopah, and is competent to testify with reference thereto. And in this behalf affiant further says that the entire structural plant of the said Water Company of Tonopah can be reproduced new for the sum of \$304,495, which sum, and amount may be summarized as follows:

COST OF REPRODUCTION, NEW

Office building and furnishings.....	\$2,000
Transmission mains	105,000
Main reservoir	12,000
Wells and collecting aqueducts.....	22,500
Power lines and telephone lines.....	22,000
Power plant and equipment.....	23,000
Horses, harness and wagon.....	200
Two cottages, furnished.....	2,000
Distribution system.....	32,000
Rescue reservoir.....	5,000
Tanks for fire protection.....	400
Meters, installed and in stock.....	9,800
Pump and pipe line to Belmont.....	7,400
Total.....	\$243,300
Add 20% for all contingencies.....	48,660
Total.....	\$291,960
Tools, supplies and working capital.....	5,000
Land.....	7,535
Grand total.....	\$304,495

Affiant further says that the structural plant of said Water Company of Tonopah is very considerably worn and depreciated in quality, and that in its present condition the entire plant could be reproduced for the sum of \$230,027.50, which sum and amount may be summarized as follows:

THE PRESENT VALUE

Office building and furnishings.....	\$1,600
Transmission mains	69,000
Main reservoir	11,000
Wells and collecting aqueducts.....	18,500
Power lines and telephone lines.....	17,500
Power plant and equipment.....	18,000
Horses, harness and wagon.....	200
Two cottages, furnished.....	1,800
Distribution system.....	19,000
Rescue reservoir.....	4,000
Tanks for fire protection.....	850
Meters, installed and in stock.....	6,000
Pump and pipe line to Belmont.....	6,500
Total.....	\$173,450
Add for all contingencies.....	44,042
Total.....	\$217,492
Tools, supplies and working capital.....	5,000
Land.....	7,535
Grand total.....	\$230,027

Affiant further says that for the year ending June 30, 1911, the gross earnings of the said Water Company of Tonopah amounted to \$81,674.55, and that the total operating expenses for the same year amounted to the sum of \$26,086.68, leaving a balance of \$55,587.87 net.

Affiant further says that for the year ending June 30, 1912, the gross earnings of said Water Company of Tonopah amounted to the sum of \$95,721.05, and that the total operating expenses amounted to the sum of \$35,248.58, leaving a net balance of \$60,472.47.

Affiant further says that for the first nine months of the fiscal year ending June 30, 1913, the gross earnings of said Water Company of Tonopah amounted to the sum of \$90,245.25, and that the same ratio of earnings extended for the full period of twelve months to June 30, 1913, will amount to the sum of \$120,327; further, that, upon the said nine months' basis, for the period of one year, ending June 30, 1913, the total expenses of said company will amount to the sum of \$51,319.28, leaving a balance of \$69,007.72, all of which affiant says shows a very substantial and healthy increase in the business of said Water Company of Tonopah, both gross and net.

In this behalf affiant further says that the expense account of the said Water Company of Tonopah, for approximately two years last passed, contains an item of \$12,000, annual salary paid to one E. G. Wheeler as vice-president of said company, for which no service of any value has been rendered to said company by said Wheeler, so far as affiant can ascertain from the official reports of said company; and that deducting said \$12,000 from the expenses for the year ending June 30, 1913, a balance remains of \$39,319.28 as the legitimate expenses of said company, which sum deducted from the gross earnings for said year, leaves a net profit of \$81,007.72.

Affiant further says that, after a full examination of the properties of said Water Company of Tonopah, including its methods of operation, there is no apparent reason why the business should show any falling off during the year ending June 30, 1914, or why the expenses should in any way exceed those for the year ending June 30, 1913.

Affiant further says that during the year ending June 30, 1911, the total gross earnings of the Goldfield Water Company, which includes the sewer company of said last-named city, amounted to \$88,196.63. That during said year the salaries of executive officers of the said Goldfield Water Company amounted to \$4,800, while those of the officers of the Water Company of Tonopah amounted to \$9,900.

Affiant further says that during the year ending June 30, 1912, the gross earnings of the Goldfield Water Company, including the sewer company of said city, amounted to \$94,991.68. That the salaries of the executive officers of said company amounted to the sum of \$4,800, and that for the same period the salaries of the executive officers of the Water Company of Tonopah amounted to the sum of \$16,000.

Affiant further says that, upon the basis of the rates fixed by the order of the Public Service Commission of Nevada, which rates are complained of in this action, the earnings of the Water Company of Tonopah, upon a fair estimate, will amount to \$102,682, while the salaries of the executive officers will amount to the sum of \$16,951.80.

Affiant further says that the foregoing figures, relative to the salaries of the executive officers of the two companies named, are presented for the purpose of showing the unnecessary and excessive expense incurred by the Water Company of Tonopah with respect to the salaries of its executive officers.

Affiant further says that the salaried officers of the Goldfield Water Company attend to the business not only of the water company, but also of the sewer company of said city of Goldfield, while the officers of the Water Company of Tonopah perform no duties except in superintending and managing the business of the water company itself.

Affiant further says, upon the basis of the most careful examination and investigation that he has been able to make, that the total value of the properties, including the water of the Water Company of Tonopah, will not exceed the sum and amount of \$300,000, and that in affiant's opinion the value falls short of that figure, because affiant is of opinion that no value whatever can properly be assigned to the so-called water right of the company separate and apart from the value of said land. But, even allowing the valuation of approximately \$70,000, for such water, the total valuation will still not exceed the sum and amount of \$300,000 in its present condition. That the rates as prescribed by the order of

the Public Service Commission will yield to said company the gross return of not less than \$102,582; that the total legitimate expense of said company, after deducting the unnecessary salary of said E. G. Wheeler, should not and cannot exceed the sum of \$39,319.28, leaving a net profit of \$53,362.72, which, upon the total valuation of \$300,000, amounts to approximately 21%.

Affiant further says that, if 5% be allowed for depreciation and thus carried into the expense account of the plaintiff company, the figures as above given will still leave to that company a net profit of 16% per annum.

Affiant still further says that in view of the fact that the water used by the Water Company of Tonopah for the purpose of supplying the city of Tonopah, its inhabitants and the mining district of Tonopah with water, being exclusively percolating water, and part and parcel of the soil, any estimate of the value of such water, or alleged water right, based upon conditions existing in southern California, where a water right is a thing apart from the land itself, and where the use is perpetual, is utterly worthless for the purposes of this case, and that in affiant's best judgment the Public Service Commission of Nevada was justified in rejecting the estimates made by the plaintiff's witnesses that the so-called water right of the plaintiff company is of the value of \$500,000, or any other sum or amount of money whatever, separate and apart from the value of the land which contains such water, and in which the said water is developed.

And, further, at this time, affiant saith not.

(Signed) W. K. FREUDENBERGER.

Subscribed and sworn to before me, this 19th day of August, 1913.

(Signed) T. J. EDWARDS, *Clerk*.

By H. T. EDWARDS, *Deputy*.

DECISION ON MOTION FOR TEMPORARY INJUNCTION IN TONOPAH WATER CASE

By the Court, MORROW, J., presiding:

I do not think the evidence is sufficient to justify the Court in granting the temporary injunction. It is by no means clear that the water rates prescribed by the Commission in this case will be confiscatory. On the contrary, the charge made in the bill that such would be the case seems to me to be fully rebutted by the answer and its supporting affidavit. The well-established rule is that upon an application for a temporary injunction, if an answer under oath has been filed denying the equities of the bill, the temporary injunction will not issue, for the reason that the sworn answer is evidence on behalf of the defendant and rebuts the allegations of the bill, and such allegations are therefore left at least doubtful.

That is the situation here. The evidence on behalf of the claimant is not sufficient to overcome the evidence that has been submitted on behalf of the defendants. In the first place it is not clear what effect the rates prescribed by the Public Service Commission will have. They may not materially reduce the complainant's aggregate income. Tonopah appears to be a prosperous community, with the prospect that a prosperous future lies before it. It is stated in the bill that the value of the water-works, exclusive of the value of the alleged water right, is \$349,000, and it is claimed that the water right is worth \$500,000, making approximately \$849,000 as the value of the entire property.

It is alleged that the Public Service Commission in fixing rates upon this valuation of the complainant's property has made no allowance for the water right in arriving at the valuation of the property as a whole; that is to say, that it disallows the claim of \$500,000 as the valuation of the water right in fixing the valuation for the entire property. It is also alleged that there is no allowance for depreciation of the plant, and no allowance made for taxes. In the answer the Commission alleges that it does allow for taxes and for depreciation, and that, even allowing the complainant the valuation of \$500,000 for the alleged water right, it would still receive a net return exceeding 6 per cent per annum upon its actual investment. This hardly amounts to confiscation, even under the high rate of interest prevailing in Nevada. But has the complainant a water right upon which it can fix a valuation of \$500,000? I very much doubt it. The water which it claims as a water right is percolating water running through its lands. I do not understand that percolating water passing under or through the soil is anywhere recognized as a water right having a valuation separate and distinct from the land. It is not in any sense surface water. It is not water appropriated from running streams; nor is it water the right to which is the same as that of a riparian owner. Percolating water is part and parcel of the soil, and it is as much a constituent element of the land as the mineral therein contained. Its value, if it has any, is, therefore, in the

land and cannot be separated from the land. It follows that in this case the value which the water has must be in the land. It may be that the complainant's development of water upon this land has given it a largely increased value, but, if that is so, it appears to me that that should be the valuation of the land with its water contained as a whole, and not as land with a water right attached. This may not make a great difference in the result; but it will enable the Commission and the Court to make a comparison with other land of like character and similarly situated.

In any event, it is my opinion that the evidence now before the Court is not sufficient to warrant the Court in adding \$500,000 to the value of the complainant's land, and upon such a valuation hold that the water rate fixed by the Commission is confiscatory. Of course, there can be no question but that an investment in public utilities like the property of a railroad company, a water company or a gas company should, under normal conditions, receive a fair and reasonable return, based upon the fair and reasonable valuation of the property or the capital invested. In the West the development of water, like the development of gold, silver or copper, may add enormously to the value of the land, and in such a case the owner of the land is entitled to add such increased valuation to the value of the land when offered for sale or when appropriated for public use. But in this case we have not yet reached the point where this valuation has been established.

By Mr. ATHEARN—May I interrupt your Honor?

By THE COURT—Yes.

By Mr. ATHEARN—But the fact still remains, your Honor, that the Commission did not have any right to go outside the evidence taken at the hearings upon which to base their findings as to the physical valuation of these properties. We do not contend, your Honor, that they did not have any right to use any other information but the evidence stated by us, but they certainly had no right to go outside of the facts brought before the Commission at the hearings upon which to base their valuation of our properties.

By Judge BARTINE—We took your own valuation, Mr. Athearn, of the physical property, but rejected your estimate of the water-right value.

By THE COURT—The inquiry we are now making is near the surface. We are not required to go into the question whether the Commission had proper evidence before it in making its valuation. What the Court holds is that the evidence is not sufficient to warrant the Court in holding that the increased valuation claimed by the complainant should have been made by the Commission. We are of the opinion that such increased valuation has not been established by the evidence now before the Court. In other words, the Court is not prepared at this time to say that, considering all the material facts that have been brought to the attention of the Court, the water rates fixed by the Commission are not fair and reasonable.

The Supreme Court of the United States, in the *Knoxville Water Rate Case*, stated a rule which appears to be applicable here. It is that the order of a governing body charged with the duty of fixing water rates for municipal corporations should not be suspended in its operation, by a Federal Court, before the order goes into effect, unless the rate is clearly confiscatory, and unless the complainant furnishes substantial evidence to that effect, and the practical application of the order be first ascertained. (*Knoxville v. Water Co.*, 212 U. S. 1-18.) If, under the actual operation of the order, the income derived from the rates thus fixed amounts to a confiscation of the complainant's property, there will be nothing in the present proceeding to prevent the Court from issuing an injunction to restrain the enforcement of the order.

Nothing that the Court has said is therefore intended in any sense to be construed as determining the final question of the valuation of these water rights, until all the evidence is before the Court and considered. The facts which are now before me are in no such shape as to enable me to determine that question at this time.

By Mr. ATHEARN—It is not possible to lay before your Honor entirely accurate figures in a case like this, but we will use our very best efforts along that line before the final adjudication.

By Judge BARTINE—As I take it, your Honor, the only question to be considered is, whether a sufficient showing has been made to entitle the plaintiff to a temporary injunction.

By THE COURT—The facts before me are insufficient to warrant my granting the temporary injunction asked for. The restraining order will therefore be discharged and the temporary injunction denied; but, as I have before stated,

this does not finally settle the decree in the case. The facts supporting a final decree will have to be found by a trial of the issues involved. I am simply deciding the question now as to whether or not the present restraining order should be discharged and the application for a temporary injunction denied. One of the principal questions to be yet decided is, whether or not a water right can be attached to percolating water, which is a part and parcel of the land. Is it to be deemed the same as an independent water right arising out of appropriation or riparian ownership? It seems to me that it would be difficult to establish an absolutely independent water value aside from the value of the land; but the value of the water with the land may be ascertained in view of its available uses.

I have no reason to doubt that the Public Service Commission in dealing with this matter has been actuated by a spirit of fairness, and a desire to do what is right. My previous experience with the work of this Commission has impressed me with the idea that it is desirous of performing its duties in a spirit of fairness to all. Under the circumstances, and in view of the evidence before the court, I do not feel justified in holding, for the purpose of this motion, that the order of the Commission complained of is invalid. The Clerk will enter an order in conformity with these views.

By Judge BARTINE—Then the order of the Court is that the restraining order be dismissed, and the application for a temporary injunction denied.

By THE COURT—That the restraining order will be discharged, and the application for a temporary injunction denied.

On January 16 and 17 of the present year this Commission, represented by Chief Commissioner Bartine and Engineer Freudenberger, held an informal conference with the District Attorney and County Commissioners of Nye County, and also with the representatives of the Water Company of Tonopah, with reference to the installation of an additional supply tank for fire purposes. The matter was discussed in full and, upon the request of the County Commissioners, Engineer Freudenberger has furnished recommendations and the estimate of costs pertaining to the work in view. Inasmuch as the water company must be allowed reasonable compensation for the additional service, it appeared that it might be as well for the county to install its own tank; that in the end the county would have to foot the bill anyway; and the indications are, at this writing, that the county will provide the required tank and possibly some other improvements in the appliances necessary for the effective fighting of fires.

THE NEVADA-CALIFORNIA POWER CASE

Measured either by the number of people affected or the amount of money involved, or by both, the case of the Public Service Commission of Nevada against the Nevada-California Power Company is by far the most important with which the Public Service Commission has been called upon to deal. The value of the power company's property used in the service of furnishing light and power, according to the company's own evidence, is something more than \$5,000,000, while, apart from the testimony, the company itself gives to its property an estimated valuation of about \$8,000,000. For the purpose of the case the Commission could not fairly consider any estimate of valuation above that given by Mr. H. P. Gillette, the expert witness who made the valuations. Mr. Gillette is one of the most noted professional appraisers in the United States, and it is difficult to find much fault with his valuation of the structural properties which have been created by the direct expenditure of money. When it comes to estimating the value of things intangible, or even those which have a tangibility but do not actually represent an investment of money, his figures do not carry the same weight, because he is there dealing with

things the value of which is in its nature uncertain. But, estimating that the total valuation of the property of this company, including its water rights, is approximately \$5,000,000, it can be seen at a glance that the Commission was dealing with a very large and important concern.

The mere value of the property, however, is of less consequence as a matter of public interest than the number of people and the amount of business affected by the operations of this company. The defendant corporation furnishes light and power to all of the larger communities located in the counties of Nye and Esmeralda. These communities comprise probably not less than 15,000 persons. The business carried on by them is of great magnitude and of very large money value.

Like the Tonopah water case and others, the Commission took up this case upon its own motion, although prior thereto the matter had been brought to the attention of the Commission through a complaint made by the grand jury of Nye County in July, 1912. The case was prepared by the respondent company with great care and thoroughness as well as at very heavy expense. It is only fair to say that it is difficult to see how a case could have been made up much more comprehensively than it was. It is also proper to remark that the Commission has no adverse criticism to make of the manner in which it was done or the spirit of fairness displayed by Mr. Gillette. All of his views were not accepted by the Commission, but that was merely a difference of opinion and in no way indicates a lack of the very highest respect for that distinguished expert. In this office the case was assigned to First Associate Commissioner Shaughnessy who, with some aid from the Commission's engineer, Mr. Freudenberger, made up the case on behalf of the Commission in all matters of statistical data.

The Commission was divided upon the subject of water-right valuation, Commissioner Shaughnessy adopting the view that no value whatever should be attached to the respondent company's water rights. With this view the majority of the Commission could not agree. But, in the conclusions reached as to what would be just and reasonable rates under all the circumstances and conditions connected with the operations of this company, in the district which it served, there was no material difference of opinion, and the order as made met the approval of the entire Commission.

The rates in force at the commencement of the proceeding were unquestionably very high, even after making full allowance for the high prices which generally prevail throughout the district served. This is conclusively shown by the fact that, after reducing the initial rate charged for lighting from 20 cents per kilowatt hour to 9 cents, with graduated reductions for larger quantities consumed, and making very considerable reductions in power rates, the company is left with a net income of more than 9 per cent net upon the full value of its property, as shown by the testimony of Mr. Gillette. There is no doubt in the minds of the Commissioners, who recognize the water right as having a value proper to be considered, that Mr. Gillette's estimate was too high. Such being the case, it follows as of course that, giving to the water right what would be a fair and reasonable valuation, the net returns of the company would be considerably more than the percentage above named. In a section of country like that which contains Tonopah, Goldfield, and Manhattan, it cannot be considered that even 12 per cent return is excessive, provided such return can be secured upon the basis of rates that are reasonable

per se by comparison with rates charged for similar services elsewhere under like circumstances and conditions. It is believed that the Commission reached a very equitable conclusion in this case. We are confirmed in this view by the fact that, according to our latest information, the company has decided to apply the rates without contesting the order in court.

According to the best estimates the Commission has been able to make, the reductions in the company's revenue will amount to about \$48,000 per annum. The company itself estimates the reductions at \$100,000 per annum. This estimate we regard as excessive. At the outside, we do not believe that the reduction will amount to anything more than \$50,000 a year, and according to the best data attainable this will leave the company with a net return of between 9 and 10 per cent per annum.

It is a great pleasure to the Commission to know that this action appears to have received the unqualified approval of the great bulk of the people who are patrons of the respondent company.

It may not be out of place to direct attention here to the fact that the reductions in rates of the Nevada-California Power Company and of the Tonopah Water Company together amount to approximately \$70,000 per annum, which is sufficient in itself to cover the entire expenses of the Public Service Commission, conducted as it now is, for a period of nearly twelve years.

Following are the opinions and order in the case, which are published in full because of what is believed to be the valuable matter contained therein:

[Case No. U 44]

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION OF NEVADA, *Complainant*,

v.

THE NEVADA-CALIFORNIA POWER COMPANY, *Respondent*.

Appearances:

For Complainant—

Geo. B. Thatcher, Attorney-General of Nevada.

J. A. Sanders, District Attorney of Nye County.

For Respondent—

I. B. Potter, Chief Counsel.

J. R. Dixon, General Attorney.

H. P. Gillette, Expert and Consulting Engineer.

C. O. Poole, Chief Engineer.

J. C. Black, Valuation Engineer.

OPINION

SHAUGHNESSY, *First Associate Commissioner*:

This proceeding was begun by the Commission, upon its own motion, August 9, 1912.

The original complaint upon which this action is based was filed by the grand jury of Nye County, July 29, 1912, and was to the effect that the commercial lighting rates of the Nevada-California Power Company were excessive and discriminatory in the town of Tonopah.

Citation was served upon the respondent company August 9, which was answered on September 6, and thereafter the case came on for hearing at Tonopah, before Commissioners Shaughnessy and Simmons, September 25, 1912.

At the hearing it was found that the valuation of the property was not available, and also that there were lacking certain other statistical data which would be necessary before a determination of the reasonableness of the rates as applied to Tonopah could be determined. Respondent was granted sixty days in which to make and furnish to the Commission a valuation of that part of its property reasonably necessary to be used in furnishing the Tonopah service.

On December 6, Mr. I. B. Potter, counsel for respondent, and Auditor Hodge appeared before the Commission at Carson City, and furnished the statistical data called for at the Tonopah hearing. The valuation of the property was not, however, in sufficiently accurate detail to satisfy either the defendant company or the Commission. Mr. Potter explained that the records of the company were in such condition that it would be impossible to make a satisfactory valuation of the property without an inventory appraisal thereof being made, and advised that in order to do substantial justice by all concerned, his company had employed Consulting Engineer H. P. Gillette and his force of experts to make a reproduction valuation of all of the property used in serving its entire southern Nevada district.

On behalf of the Commission, its engineer, Mr. W. K. Freudenberger, made an inspection of the respondent company's property and was, during the progress of the valuation work, actively in touch with the valuation experts. Thus the Commission is in possession of full information as to the thoroughness with which the appraisal was made.

On May 10 a further hearing was held by the Commission at Carson City, at which time Mr. H. P. Gillette appeared and put in evidence his reproduction valuation of respondent's entire property, including a segregation of the value of that portion of the property used in furnishing the service at Tonopah.

Following the close of the Tonopah case, further complaint was made to the Commission covering the reasonableness of respondent's power rates. In consideration thereof, and having in mind respondent's earnest contentions at the above hearings, that the company's property in southern Nevada should be treated as an operating unit from a rate-making standpoint; that because of business policy the company has always and does now maintain a uniform scale of lighting and power rates throughout its entire southern Nevada territory; that the continuation of this policy would be advantageous both to the company and its patrons, and that no reduction should be made at Tonopah where the company is enjoying prosperity, without first considering the effect at other points in southern Nevada where a severe depression exists and where the company is making little or no money, the Commission concluded that it would be advantageous to cover the entire rate situation by a general investigation.

Accordingly, therefore, it issued another citation and extended the said Tonopah case, so that it now embraces the lighting and power rates of respondent's entire district in southern Nevada, comprising the towns of Tonopah, Goldfield, Rhyolite, Pioneer, Manhattan, Round Mountain, Millers, Blair, and Silver Peak.

On August 29 the case came on for hearing before the Commission at Carson City. At the opening of the hearing it was stipulated that the testimony taken in the Tonopah case should be considered as testimony in the extended case. Thereafter further testimony was taken and the case as a whole fully and ably argued by Attorney Dixon for the respondent company. The additional testimony went chiefly to a revised estimate of the value of the property, and to an increase in the average annual operating expenses, due to the abnormal low-water period of 1913. As the net result of these changes is unimportant, and in fact closely approximates the results reached by Mr. Gillette's original report, this testimony need not be considered in detail.

For the purpose of this case, therefore, fair consideration of the original report will be sufficient to fully measure the extent of respondent's property, expenditures, etc., that is useful and properly chargeable to the Nevada service. In passing it may be said that respondent has a large additional investment in power plant used in the southern California service. On a capacity basis the California plant is approximately 60 per cent of the Nevada plant.

The Nevada-California Power Company is a Wyoming corporation, and was organized in January, 1907. It succeeded to the property and assets of the Nevada Power, Mining and Milling Company, a Wyoming corporation having similar objects and purposes. The original company, as well as the present company, was organized for the purpose of generating electric power by hydro-electric methods on Bishop Creek, Inyo County, Cal., and of transmitting said current from California directly into the State of Nevada and into the mining camps and districts covered by the two counties of Esmeralda and Nye. These two counties comprise a large area of the southern part of the State of Nevada, and the principal industry of the territory covered by these two counties is mining. The agricultural resources are small and the industrial enterprises, such as they are, are the outgrowth of the mining industry.

The company generates no power whatever in Nevada. The current is gen-

erated by water power at the plants on Bishop Creek, and transmitted to the mining camps of Nevada over a maximum distance of 144 miles.

The transmission-line mileage is classified as follows:

TABLE A—LENGTH OF TRANSMISSION LINES OF THE NEVADA-CALIFORNIA POWER COMPANY

<i>From Bishop, California—</i>	<i>Miles</i>
One line to Round Mountain, Nevada.....	144
Another line to Tonopah, Nevada.....	107
Branch from Palmetto to Pioneer, Nevada.....	81
Branch from Central to Manhattan, Nevada.....	24
Branch from Tonopah to Millers, Nevada.....	18
Branch from Alkali to Goldfield, Nevada.....	94
Branch from Silver Peak to Valcalde Mine and Blair, Nevada.....	74
Branch from Silver Peak to Valcalde Pump.....	74
Branch to Liberty Mine.....	2
Total transmission mileage.....	874

CAPITALIZATION

The capitalization of the company as of June 30, 1913, is as follows:

Common stock outstanding.....	\$5,000,000.00
Six per cent bonds outstanding.....	2,784,000.00
Total capitalization.....	\$7,784,000.00

Respondent alleges that in financing the company the promoters were forced to take into account the fact that the mining camps and properties throughout the southern Nevada district were not contiguous, and that they extend in all directions; that the population of Tonopah and Goldfield and other mining camps was, by reason of the uncertain fortunes of the mining industry, shifting from one mining camp to the other, and often the more populous camps shifted and changed in fortune and population from year to year and sometimes from month to month, thus making the market for electric power in the said districts rather speculative and uncertain in character. In view of these conditions it is alleged that it became necessary to add a stock bonus of approximately 60 per cent to the bonds of the company which were placed on the market. A little later, as the company became established and the prospects for success became brighter, this bonus of 60 per cent was materially reduced from year to year. In this way the sale of bonds, approximating \$2,200,000 out of a total authorized issue of \$3,000,000, carried with it a stock bonus of approximately \$1,185,000 at par value of stock. The company defends this stock bonus on the grounds given above, and also that this "bonus" expenditure was in lieu of the discount at which bonds are ordinarily sold in the promotion of similar enterprises.

Respondent further alleges that a very substantial and important part of the company's properties is embraced in its water appropriations, water rights, water locations and water developments, including reservoirs, dams, flumes, pipe lines and appurtenant equipment in and along the channel of Bishop Creek in the county of Inyo, State of California. These appropriations were made beginning in the year 1904, and continued from time to time thereafter. They cover in the aggregate the right to the use of the entire flow, including the surplus waters of Bishop Creek. After the use for power purposes, the water is returned to its natural channel and passes on into Owens Valley where the water is owned by right of appropriation, and used for agricultural purposes.

This flow, at the time of the original appropriation now owned by the company, was at normal low-water state, comprising about 15 second-feet. The normal constant flow has been developed to approximately 80 second-feet, and will, upon the full development of the company's reservoirs, be not less than 100 second-feet. This flow, together with the precipitous nature of the canyon at Bishop Creek, will upon full development place within the company's command a total capacity of approximately 33,000 kilowatts, or 44,000 horsepower. The possible development with 80 second-feet of water is 27,000 kilowatts, or 36,000 horsepower, whereas there is installed at the present time approximately 21,500 kilowatts, or 28,000 horsepower.

The cost of acquiring these water rights and rights of way necessary to their use was put in by the company at \$225,385. It is urged that these locations following their development and use have acquired a very substantial value over and above the cost of purchase and development.

Respondent further alleges that, because the population of southern Nevada is not stable and is continually shifting from one camp to the other, it is highly desirable that a uniform rate be maintained throughout the district, and that

there is therefore no good reason for segregating any one of these camps from the other for the purpose of making or establishing a special rate, which, after all, it is contended, may have only a temporary application to existing conditions.

Respondent urges that its business in southern Nevada is hazardous, for the reason that the mining industry is fluctuating in character and of uncertain tenure. In support of this statement testimony was introduced showing that the camp of Rhyolite is now practically dead, and that the camp of Goldfield has decreased in population from approximately 20,000 at one time to about 3,000 at the present time. Further, that, as a result of the uncertainty of the Nevada business, the company has made arrangements to enter the territory of southern California where, as counsel argued before the Commission, "the demand is permanent and ever increasing."

Aside from the testimony that certain mining camps in southern Nevada are about exhausted, no showing was made by which any definite conclusion can be reached as to the ultimate life of the mining camps, which are now furnishing respondent a large and profitable business.

From a mining standpoint, the production of ore at Tonopah, Goldfield, Manhattan, Round Mountain, and Silver Peak is heavier today than at any other time in the history of those camps. While the ores may be of lesser value than formerly, nevertheless it is their volume which is of primary importance from the standpoint of the power and lighting business of respondent.

With reference to the uncertainty of mining camps generally, the principles laid down by the Commission in the case of the *City of Ely v. Ely Light and Power Company* may be fairly applied in this case. Speaking through Chief Commissioner Bartine, the Commission said:

Too much weight should not be given to the claim that mining camps are short-lived, for the purpose of justifying what might appear to be excessive rates. When a public service corporation engages in business in such a locality, it takes no greater risks generally than most business men in the same place. It is sometimes said that there is a difference between a public service corporation and parties engaged in other lines of business, in this: that the public service corporation is subject to regulation, while other callings are not. It is hard to say just how much weight should be attached to this distinction. While it is true that a merchant in a mining camp is not subject to regulation, it is equally true that he is subject to competition. On the other hand, while the public service corporation is subject to regulation, in small communities it is free from competition. In other words, as elsewhere herein stated, public service corporations are generally monopolies, having complete control of the business in their particular lines.

Going a step further, attention might be called to the fact that, while the public service corporation takes chances in establishing itself in a mining camp, every other business concern does the same thing. In this particular case, for example, if the city of Ely should ever greatly diminish in size and general prosperity, while it would affect the business of the public service corporation, the business of the people would be affected in much the same way and probably in about the same ratio. It is figured that when the mining camp ceases to be of any consequence, the public service plant ceases to be of any more than salvage value. The same is true of nearly all the other property in such mining camp. Some of the real property hardly has a salvage value. The principle does not seem to be entirely sound that a public service corporation engaging in business in a mining camp should be absolutely secured against loss, by being allowed to charge extraordinarily high rates, while every one else engaged in business therein must accept such prices as he can get for what he has to sell. Putting it briefly, the public service corporation and the community which it serves must stand or fall together. So, that, while it may be proper to allow something additional to a public service corporation, in the way of charges, because of the uncertainty of the life of a mining camp, we should also be exceedingly careful, for the reasons above stated, not to attach undue weight to this consideration.

In the absence of a specific showing as to the life of the southern Nevada mining camps served by respondent, and in the light of a full review of the testimony, it will not be unfair to fix our conclusions upon the basis of existing conditions. Taking the testimony as it stands and giving it fair consideration,

the record shows that the respondent company has been doing a large and profitable business during the past six years, which, it will be observed from the following table, shows a substantial increase from year to year:

TABLE B—GROSS EARNINGS, OPERATING EXPENSES, AND NET INCOME

<i>For the year ending December 31—</i>	<i>1907</i>	<i>1908</i>	<i>1909</i>	<i>1910</i>	<i>1911</i>	<i>1912</i>	<i>General average</i>
Gross earnings.....	\$612,676	\$651,066	\$708,314	\$744,644	\$766,846	\$870,554	\$725,681
Operating expenses.....	\$208,482	\$184,998	\$201,474	\$164,667	\$142,061	\$161,456	\$177,188
Taxes.....	6,000	16,964	18,000	21,000	21,000	19,500	17,077
Depreciation.....		12,787	27,666	46,526	49,760	69,750	34,415
Total deductions.....	\$214,482	\$214,789	\$247,140	\$232,193	\$212,821	\$250,706	\$228,680
Net income.....	\$398,194	\$436,317	\$461,174	\$512,451	\$554,025	\$619,848	\$497,001

NOTE—\$41,555, reported as "Rental" for 1912, has been excluded from operating expenses, because it covers associated property which has been made a part of the valuation in this case.

Aggregating the above annual amounts for the six-year period, the results are as follows:

Gross earnings.....		\$4,354,090
Operating expenses.....	\$1,063,128	
Taxes.....	102,464	
Depreciation.....	206,489	
Total deductions.....	1,372,081	
Net income.....	\$2,982,009	
Ratio of total deductions to gross earnings.....	31.50%	

It may also be added that, since this case closed, respondent has filed its annual report for the fiscal year ending June 30, 1913, showing as gross earnings \$947,000.

That the foregoing earnings for the fiscal year 1913 are conservative, and do not equal what they may fairly be expected to aggregate for the calendar year 1913, is made clear by a check of respondent's business covering the months of March and September, 1913, from which it is found that the gross earnings, if carried forward on the basis of these average months for the calendar-year period, will approximate \$980,000.

To find the average deductions and the net income that may fairly be expected to accrue for the calendar year ending December 31, apply 31.50 per cent, the ratio of total deductions to gross earnings for the six-year period ending December 31, 1912, shown by Table B, to \$980,000, the estimated gross earnings shown above, and it will be found that total deductions amount to \$308,700, and that the net income will be \$671,300.

Aggregating the net income made by respondent on the Nevada business, over the six-year period shown by Table B, and the estimated net income for the year 1913 (\$671,300), it will be seen, brings a grand total of \$3,611,744.

This total net income comprises a return for the seven-year period of approximately 70 per cent upon respondent's appraised value of the property as of the time made, i. e., December 31, 1912. Approximately 23 per cent of the said appraised value covers intangible water-right value. If excluded, and the net income is applied to the tangible value of the property, the net return will be approximately 96 per cent. In fact, figuring on the average value of the property investment made from time to time over the seven-year period, the total net return will exceed 100 per cent.

The above analysis shows that respondent has already secured in the aggregate a net income return practically equivalent to its actual investment. In view of the foregoing, and also because of the very substantial increases made in earnings from year to year, it is clear that the mining industry in southern Nevada is in a highly prosperous condition, and until some change actually takes place, we do not feel that the so-called hazard is entitled to undue consideration.

FRANCHISE

The respondent company (a Wyoming corporation) is operating throughout southern Nevada, under a Nevada franchise, which was acquired by the company under the provisions of the Act of February 29, 1886, as amended March 29, 1907, and as amended March 23, 1909, which limits the franchise to a period of twenty-five years from the date thereof. The Act as amended (1909) specifically provides that the franchise shall be held subject to the power of the Public Service Commission to regulate and control the services, practices, regulations, and charges of all public utilities operating thereunder.

CUSTOMERS SERVED

On March 1, 1913, respondent was serving 2,044 customers in Southern Nevada, which classify as follows:

TABLE C

	<i>Residence service</i>	<i>Business service</i>	<i>Power service</i>	<i>Total</i>
Goldfield	568	268	12	848
Tonopah	559	248	20	827
Millers	23	9	1	33
Manhattan	107	57	22	186
Round Mountain	27	19	--	46
Rhyolite	31	19	4	54
Pioneer	4	4	--	8
Blair	28	9	--	37
Silver Peak	--	3	1	4
Bonnie Clare	--	--	1	1
Grand total	1,347	636	61	2,044

THE APPRAISAL OF RESPONDENT'S PROPERTY

The appraisal, and in fact practically all of the calculations which are material to this case, cover the period beginning January 1, 1906, and ending December 31, 1912. The Commission will consider the valuation as of the time made, viz, for the period ending December 31, 1912.

The valuation of respondent's property was made by Mr. H. P. Gillette of Philadelphia, a consulting engineer of wide experience. Considered upon the theory by which he has worked out his conclusions, the valuation report is an able presentation of the subject. It is possible, however, that, after full consideration, the Commission may be unable to agree in all respects with the conclusions which he has reached. If this should be the result, it is not to be construed as any reflection upon the merit of his report, or the manifest intention on his part to treat the question of valuation fairly.

In making the appraisal Mr. Gillette considered three methods of estimating the cost of respondent's property, designated as follows:

- (1) The historical, or original cost, method.
- (2) The replacement, or reproduction (new), method.
- (3) The equivalent, or reproduction, method, less depreciation and obsolescence.

The original cost is defined as the actual amount of money expended for the property, or, in other words, the cost under past conditions. This method contemplates a valuation higher than the cost to reproduce the property new, due largely to piecemeal construction.

The replacement, or reproduction cost (new), is defined as the amount which would have to be expended at the present time to construct a plant similar in all respects to that which is already in service, or, in other words, the cost under existing conditions. This method contemplates a valuation less than the original cost, due largely to wholesale construction.

The equivalent, or reproduction, cost, less depreciation and obsolescence, is defined as the amount which it would cost to design and construct a modern new plant that will give the same service as the existing plant; or, in other words, considering depreciation and obsolescence, a valuation that will be less than the reproduction (new) valuation of the existing plant.

Mr. Gillette adopts the historical or original cost method of appraisal for the following reasons:

Few appraisals can be found that are based entirely upon one of the three methods above outlined. Usually a mixture of the historical method and the replacement method has occurred; but, with a growing knowledge of the subject of appraisals, the tendency has been to adopt one or the other of these methods.

Original Cost: By the very nature of the growth of plants of most public utilities, relatively small extensions and additions are made at intervals. Not only is the unit cost of labor greater on such piecemeal work, but existing structures and existing traffic make the unit cost greater. Furthermore, prices paid for materials bought in small lots and the freight rates paid on less-than-carload lots serve to add to the cost of such piecemeal construction. It is clear that a public service corporation could not secure a fair return on its investment if it were to build piecemeal and pay the high piecemeal costs, yet were given a return on the cost of reproducing its plant wholesale.

Reproduction (New) Method: If the replacement method, which is

based on wholesale construction, is adopted, it is evident that the investment of nearly every public service corporation would suffer a heavy depreciation and a depreciation not of its own making. It would be possible to give consideration to this depreciation when calculating the development expense or going value, of the property, and thus recoup the public service corporation; but this would unnecessarily complicate the appraisal problem.

Reproduction Method, Less Depreciation and Obsolescence: The equivalent plant method has never been used in its entirety in any appraisal made for a public service commission, but it has not infrequently found advocates when question has arisen as to the value of more or less obsolete machinery.

The unit costs used in the appraisal are those based upon a combination of piecemeal and wholesale construction, for the reason that part of the plant was built in small sections and part was built in large sections. They were determined by taking the average of the actual costs during a preceding period of years.

The appraisal as made and submitted to the Commission by Mr. Gillette, covering a total installed capacity of 13,000 kilowatts, is as shown by the following table:

TABLE D—THE NEVADA-CALIFORNIA POWER COMPANY
Estimated Cost of Reproduction of Property as of December 31, 1912

SUMMARY	
1 Clearing, grading, roads, walks, etc.	\$80,374
2 Transmission system	584,674
3 Transmission switching and protective equipment	24,782
4 Distribution system	156,341
5 Line transformers	20,077
6 Service connections	7,269
7 Service meters	38,428
8 Rental equipment	7,737
9 Storage reservoirs	182,927
10 Diverting dams and pipe lines	451,690
11 Power-plant buildings	40,438
12 Substation buildings	44,722
13 Transmission switch and arrester houses	15,826
14 Miscellaneous buildings	107,483
15 Power-plant equipment	272,437
16 Substation equipment	130,007
17 Shop equipment	2,364
18 Construction equipment	19,413
19 Horses and vehicles	10,045
20 Tools and instruments	7,458
21 Furniture and fixtures	9,266
Total	\$2,213,758
22 Engineering, 5% of items 1 to 21, inclusive	110,688
23 Business management, 5% of items 1 to 21, inclusive	110,688
	\$2,435,134
24 Legal, general expenses, taxes, 1½% of items 1 to 23, inclusive	36,527
	\$2,471,661
25 Interest during construction, 5% of items 1 to 24, inclusive	123,583
	\$2,595,244
26 Contingencies, 5% items 1 to 25, inclusive	129,762
	\$2,725,006
27 Brokerage fees, 5% items 1 to 26, inclusive	136,250
	\$2,861,256
28 Stores and supplies	70,693
29 Working cash capital	100,000
30 Rights of way	4,886
31 Other land used in operation	1,940
	\$3,038,775
32 Legal expenses, interest and brokerage fee, 12% of items 30 and 31	819
	\$3,039,594
33 Water-power right value	1,587,000
34 Excess cost of wire	126,535
34A Overhead charges on No. 34, 29.25%	37,012
35 Uncompleted construction	114,724
36 Property of other companies	550,119
37 Extras	987
38 Nonoperative property	670
Grand total	\$5,456,641

NOTE—See deductions and net total in Table D-1, following.

From the above grand total, the valuation report shows that the following corrections should be made in order to ascertain the net total valuation which Mr. Gillette charges against the Nevada service:

TABLE D-1

Total brought forward from Table D.....	\$5,456,641
Deduct, as assignable to Southern Sierras Power Company (item 33).....	\$175,000
Deduct, uncompleted construction Plant 3 (item 35).....	106,022
Total deductions.....	281,022
Net total valuations.....	\$5,175,619

The report shows that the deduction of \$175,000 from item 33, Table D, covers water-right value not assignable to Nevada, and therefore the net valuation of the water-power right, over and above the development cost of the same, is \$1,412,000.

WATER-POWER RIGHT VALUE

The appraisal would not in any sense be complete or enlightening without analyzing and showing the method by which the water-power right valuation was determined. Mr. Gillette contends that a water right is property, and therefore as much entitled to a fair return in fixing rates as land used in operation.

The elements which he claims give to a water right its value are:

- (1) Right to use a certain quantity of water.
- (2) Right to use land having topography suitable for the generation of water power.
- (3) Possession of a suitable power plant.
- (4) Possession of a market in which power can be sold at a profit.

He shows that the rule commonly used by engineers in appraising the value of water power is the steam comparison method, or, more fully stated:

The value of a water power is the capitalized annual saving in the cost effected by the water power contrasted with steam power.

This rule, of course, applies to all other substitute forms of power as well.

After reviewing the steam comparison method of valuing water rights, which would produce the maximum unit price for hydroelectric power in wholesale quantities, and therefore the maximum water-right valuation, Mr. Gillette adopts the "Capitalized Profit Method."

Briefly stated, this method is defined as follows:

Capitalize the true annual net profit derivable from the sale of the water-generated power in wholesale quantities.

In order to make the question entirely clear, the calculations by which Mr. Gillette reached the valuation of \$1,587,000 for water-right value, and also his estimate of the higher cost factor which would be produced and capitalized if the "Steam Comparison Method" were used, is set forth below:

CALCULATION OF WATER-POWER RIGHT VALUE

General: In estimating the water-power right value of the Nevada-California Power Company, the "Capitalized Net Profit Method" is used, the usual practice of considering only the wholesale production and sale of power being followed. The method thus involves the assumption that all power is sold at the substation at wholesale rates, and that the distribution business is handled independently or as if by a separate distributing company.

The following gives data on production and consumption of current. Present calculations are based on the business of the year 1912—that is, on 66,001,450 KWH generated. As the plant capacity is 13,500 KW, this indicates a capacity load factor of 55.8% at the generating station. Although the load in Nevada involves many elements of uncertainty, the transmission line of the Southern Sierras Power Company, now completed to San Bernardino, Cal., will make possible a decided improvement in load. This will increase the value of the water-power rights on Bishop Creek, but the increase will pertain to business in another district, and will not affect the value of the rights used in serving territory now under consideration. However, the now demonstrated fact that current generated on Bishop Creek can be marketed in a district of comparatively stable conditions (that is, in southern California) reduces the element of risk on the power plants, and so involves a lower rate of return, as pointed out elsewhere in this discussion.

Production, Distribution, Line Losses, Etc.: In 1912 the current measured on customers' meters was:

Power.....	52,044,580 KWH
Light.....	1,160,052 KWH
Total.....	53,204,632 KWH

The total received at the substation was 55,178,356 KWH, thus showing a distribution loss of 1,973,723 KWH. It is impossible without an elaborate set of special measurements to determine just how this loss was distributed, but, as the most important of the power distribution lines are short, it is evident that the loss there will be small. A lighting distribution loss of 20% is reasonable, and the loss in this case will be estimated at that rate, although such losses are very commonly higher. At 20% it amounts to 232,010 KWH, and this deducted from 1,973,723 KWH indicates a power loss of 1,741,713 KWH, or 3.35%.

The total generated in 1912 was 66,001,450 KWH, and the total used at the power stations was 234,500 KWH, thus leaving 65,766,950 KWH delivered to the transmission lines. Transmission losses are thus seen to be about 16.1%. To reckon the total loss as a percentage of total delivered to transmission lines, we will then have for power 3.35% of 83.9% (equals 2.8%) plus 16.1% equals 18.9% total loss. And for light 20% of 83.9% (equals 16.8%) plus 16.1% equals 32.9% total loss. On this basis the total current generated for power customers was 52,044,590 divided by .811, which equals 64,173,000 KWH, and the total for lighting customers was 1,160,052 divided by .671, which equals 1,729,000 KWH.

Wholesale Power Rate: The total of the power bills for 1912 was \$746,289 for the 64,173,000 KWH generated for power purposes. This amounts to 1.162c per KWH. Since the station peak load during 1912 was 12,400 KWH, the station load factor for the year was 60.8%, and as the combined lighting and station current was less than 3% of the total generated, this load factor may be taken as applying approximately to the power load. Since the calculation is based on an assumed wholesale business, the entire current delivered to transmission lines will be estimated at the above power rate of 1.162c per KWH, or 65,767,000 × \$0.1162 equals \$763,213, which is the total wholesale income to which the company is fairly entitled. The above rate of 1.162c on a 60.8% load factor corresponds to a rate of .706c on a 100% load factor.

Rates of Fair Return: The rates here assigned are 11% on the generating plant and property pertaining thereto, and 15% on all other property.

In calculating the annual fair return I have allowed 11% true net earnings on the generating plant and water rights, and 15% true net earnings on all other property, or an average of about 12% on the entire property. In view of the nature of the business this seems to me to be a very conservative allowance.

Since the present calculation is based on an assumed wholesale business, all distribution systems and other property pertaining to the retail business of the company is excluded.

It is assumed that an average working capital of \$100,000 is sufficient for the wholesale business, and that an 8% return is proper on this.

Property Values:

		Property Entitled to 8% Return:	
29	Working cash capital.....		\$100,000
		Property Entitled to 11% Return:	
1	Clearing, grading, etc.....		\$73,193
2	Transmission system.....		13,750
3	Transmission switching and protective equipment.....		4,969
9	Storage reservoirs.....		182,927
10	Diverting dams and pipe lines.....		451,690
11	Power-plant buildings.....		40,438
13	Transmission switch and arrester houses.....		7,105
14	Miscellaneous buildings.....		31,910
15	Power-plant equipment.....		272,437
17	Shop equipment.....		2,364
18	Construction equipment.....		19,413
19	Horses and vehicles.....		7,460
20	Tools and instruments.....		1,822
21	Furniture and fixtures.....		8,263
Total (carried forward).....			\$1,112,741

Brought forward	\$1,112,741
22-27 Overhead charges, 29.25%	325,463
28 Stores and supplies	7,904
34 Excess cost of wire	4,623
34A Overhead charges on No. 34	1,352
35 Uncompleted construction	113,672
36 Property of other companies	550,119
37 Extras	987

Grand total \$2,116,861

Property Entitled to 15% Return:

1 Clearing, grading, etc.	\$7,181
2 Transmission system	570,924
3 Transmission switching and protective equipment	19,813
12 Substation buildings	44,722
13 Transmission switch and arrester houses	8,721
14 Miscellaneous buildings	26,342
16 Substation equipment	130,007
19 Horses and vehicles	1,265
20 Tools and instruments	3,331
21 Furniture and fixtures	745
Total	\$813,051
22-27 Overhead charges, 29.25%	237,808
28 Stores and supplies	11,293
30 Rights of way	4,886
31 Other land	1,640
32 Overhead charges on 30 and 31, 12%	783
34 Excess cost of wire	100,023
34A Overhead charges on 34, 29.25%	29,257
35 Uncompleted construction	1,052

Grand total \$1,199,798

Detail of Estimated Annual Operating Expenses Applicable to Wholesale Business:

Operating reservoirs, dams, and pipe lines	\$3,700
Operating power plants	22,200
Transmission line patrol and switch stations	11,800
Operating substations	5,900
Total	\$43,600
General and legal expense, insurance and damages	39,000
Taxes	18,307
Current repairs	11,320
Depreciation (on 5% sinking fund basis)	56,587
Total annual expense	\$168,814
Gross estimated wholesale earnings	\$764,213
Annual expense	\$168,814
Fair return (8% of \$100,000)	8,000
Fair return (11% of \$2,116,861)	232,855
Fair return (15% of \$1,999,798)	179,969
	589,638

Annual net profit \$174,575

\$174,575 capitalized at 11% equals \$1,587,045, which is the value of the water-power rights of the Nevada-California Power Company, used at the present time in serving customers in Nevada. Call it \$1,587,000.

Of this value \$175,000 pertains to the Southern Sierras Power Company, and \$1,412,000 to the Nevada-California Power Company, the subdivision being made on the basis of plant capacity.

Cost of Steam Power:

As shown in the forepart of this estimate under the heading "Wholesale Power Rate," the fair rate for hydroelectric power is 1.162c per KWH generated. To obtain the rate at the substation it would be necessary to increase this by 16.1%—the amount of transmission loss—thus bringing the rate to 1.349c. The rate for steam-generated power is estimated at 1.734c per KWH, at the substation, as shown in the discussion immediately following, thus indicating a saving of 22% of hydroelectric power over steam power.

Following is an estimate of the cost of steam power considering a central station located at Tonopah. The item of greatest uncertainty in this estimate is the cost of water. It is considered that this plant would serve Tonopah, Goldfield, Millers, Manhattan, and Silver Peak; Rhyolite not being of sufficient importance at the present time to pay for the construction of a line to that point.

Estimated cost of Steam Plant at Tonopah to be operated at 81% load factor:

Steam plant for 12,000 KWH at \$100	\$1,200,000
Transmission lines, 97 miles at \$2,400	232,800
Substations, 8,400 KW, at \$10.50	89,500
Vehicles, tools and instruments	18,000

29% for overhead charges \$1,540,300
446,700

Land for power plant and substations	\$1,997,000
Stores and supplies	1,000
Total	20,000
	\$2,018,000

Fair return, 15% of \$2,018,000.....	\$302,700
Taxes, 1% of \$2,018,000.....	20,180
Depreciation, 2% of \$1,997,000.....	39,940
Current repairs, 1% of \$1,997,000.....	19,970
Power-plant wages.....	17,000
Fuel (210 KWH per bbl.), 278,600 bbls. of oil, f.o.b. Tonopah at \$1.68.....	468,040
Water, 123,000,000 gallons (at 50c per M).....	61,500
Lubricants, waste, etc.....	4,600
Operating substations.....	10,000
General expenses.....	15,000
Total annual charge.....	\$958,830
Total KWH generated is 58,611,000, which is equal to 1.635c per KWH generated, or 1.734c per KWH at the substation.	

THE ACTUAL INVESTMENT VALUE OF RESPONDENT'S DEVELOPED WATER-POWER RIGHT

Segregated and set forth, the total cost of respondent's developed water-power right, used and necessarily useful in the Nevada service, is as follows:

TABLE E

Original cost of water rights and lands.....	\$225,385
Reservoir No. 1.....	236,433
Hillside Water Company reservoir and water development.....	337,132
Total, diverting dams, pipe lines, etc.....	563,810
Clearing, grading and road building.....	80,374

Total cost of developing water right.....\$1,463,134

The above valuation of the developed water right represents its "original cost value," and is included within the "total valuation" shown by Table D.

As before shown the net water-right valuation claimed by respondent is \$1,412,000; but in this behalf it is to be said that, except an allowance of \$225,385 to cover the original cost of the water rights and lands, the balance of the water-right valuation claimed by respondent (\$1,186,615) is unearned increment value. It does not represent investment, and is additional to the purchase and development value of the water-power right shown by Table E (\$1,463,134).

VALUE OF THE PROPERTY SEGREGATED

To find the value of the property, exclusive of the water-right value claimed, item 33, Table D, should be charged with only \$225,385, the original cost of the undeveloped water rights and lands, or, computed differently, the same result is more easily reached by deducting the said unearned increment value of the water right from the "net total valuation" claimed by respondent. The following table makes the calculation clear:

TABLE F

Brought forward from Table D-1, net total valuation.....	\$5,175,619
Deduct unearned increment, water-power right value.....	1,186,615
Value of property, exclusive of above water-right value.....	\$3,989,004

UNEARNED INCREMENT VALUE OF WATER-POWER RIGHT ANALOGOUS TO INTANGIBLE FRANCHISE VALUE

An attempt to measure and include in the appraisalment, for the purpose of fixing rates, the unearned increment value which is assumed to have accrued because of the "right" to use water for power purposes is analogous to the inclusion of intangible franchise value as part of an appraisalment, made for the same purpose.

Treating the subject from the standpoint of the unearned increment value raised in this case, which is the value of the "right" over and above the actual cost of purchasing and developing the same, it is impossible to see wherein it differs materially from the intangible value which attaches to a franchise. As the value of a franchise is predicated upon the ability of the industry which it covers to earn a profit, so, likewise, is the water-right value claimed in this case predicated upon the ability of the respondent company to earn a profit.

The objection to the inclusion of franchise value is well stated by Wyman on Public Service Corporations, vol. 2, p. 1104. He says:

The value of the franchise is itself based on the capacity of the company to earn profits; and it becomes greater when the earnings of the company are increased. If, therefore, a high rate of income could be justified on account of the great value of the franchise, this fact would in turn enhance the value of the franchise itself, and so justify a still higher charge; and there would be no limit to the legal charge of the

company which could be enforced should such franchise value be permitted to increase in this way the capital charges.

The courts have thus far refused to allow any franchise valuation, other than the actual cost thereof, for the purpose of fixing rates, although such value has been allowed for the purpose of taxation and sale. In sale and tax cases the value of the franchise is usually determined by the productiveness of the industry which it covers. In other words, it is measured by capitalizing the net income in substantially the same manner as that employed in finding the water-power right value in this case.

An exception, however, is to be found in the case of *Willcox v. Consolidated Gas Company*, 212 U. S. 19. In this case a franchise valuation of \$7,780,000 was allowed by the court for the reason that this valuation was fixed by the constituent companies at the time of consolidation in 1884, and thereafter validated by the Legislature of New York. The business and also the value of the property had greatly increased between 1884, the time of consolidation, and 1905, the time at which the inquiry was made for the rate-fixing purpose. The court below found, in common with the increased value assigned to the company's tangible property, that the value of the intangible franchise property should be increased in the same ratio, thus making \$12,000,000 the value of the franchise. This, it will be noted, was a net increase of \$4,220,000.

The United States Supreme Court, upon review of the case, carefully qualified their approval of the original franchise value (\$7,780,000), and refused to allow the increased value (\$4,220,000) found by the lower court, for the following reasons, to wit:

We think that under the above facts the court ought to accept the valuation of the franchises fixed and agreed upon under the Act of 1884 as conclusive at that time. The valuation was provided for in the Act, which was followed by the companies, and the agreement regarding it has always been recognized as valid, and the stock has been largely dealt in for more than twenty years past on the basis of the validity of the valuation and of the stock issued by the company.

But although the State ought, for these reasons, to be bound to recognize the value agreed upon in 1884 as part of the property upon which a reasonable return can be demanded, we do not think an increase in that valuation ought to be allowed upon the theory suggested by the court below. Because the amount of gas supplied has increased to the extent stated, and the other and tangible property of the corporations has increased so largely in value, is not, as it seems to us, any reason for attributing a like proportional increase in the value of the franchises. Real estate may have increased in value very largely, as also the personal property, without any necessary increase in the value of the franchises. Its past value was founded upon the opportunity of obtaining these enormous and excessive returns upon the property of the company, without legislative interference with the price for the supply of gas, but that immunity for the future was, of course, uncertain, and the moment it ceased and the Legislature reduced the earnings to a reasonable sum, the great value of the franchises would be at once and unfavorably affected, but how much so it is not possible for us now to see. The value would most certainly not increase. The question of the regulation of rates did from time to time thereafter arise in the Legislature, and finally culminated in these Acts which were in existence when the court below found this increased value of the franchises. We cannot, in any view of the case, concur in that finding. * * *

What has been said herein regarding the value of the franchises in this case has been necessarily founded upon its own peculiar facts, and the decision thereon can form no precedent in regard to the valuation of franchises generally, where the facts are not similar to those in the case before us. We simply accept the sum named as the value under the circumstances stated.

Respondent's water power right is located in California, and is therefore subject to the constitutional and statutory provisions of that Commonwealth. As the "water right" was originally granted by California, under its law of appropriation, without cost, it is proper that we should ascertain what consideration is given to the question of water-right value by that State before passing upon the respondent's claim for such value in the case before us.

The question is made clear by setting forth below excerpts from decisions in which, among other features of the cases, the question of water-right value was raised and treated by the Railroad Commission and the Supreme Court of California, and by the Federal Circuit Court of the California District.

In the Northern California Power case, before the Railroad Commission of California, decided July 13, 1912, Opinions and Orders, vol. 1, *in re* application for authority to increase power and lighting rates in Shasta and other contiguous counties, the Commission refused to approve the water-power right value claimed.

The Commission, speaking through Chairman Eshleman, said:

Under the provisions of the Constitution and statutes of this State, it is legal for corporations and individuals to appropriate water for power or irrigation or other legitimate beneficial purposes, and, so long as such water is devoted to beneficial purposes, the appropriation is protected. The rule of "first in use, first in right" prevails in this State. To be sure, the appropriator who has laid his plans and complied with the law and is prosecuting his enterprise with due diligence in proportion to the magnitude of his undertaking, is protected, and by the doctrine of relation the time of his right dates from the time of the *bona fide* beginning of the work necessary to perfect his appropriation. Neither private nor public appropriators have heretofore been required initially to pay to the State anything for the right to appropriate. In other words, the State has held out, as inducement to those who desire to develop power or water for irrigation, that the first taker might hold in trust for the public, if it is a public appropriation, and during its continued use, if it were a private appropriation, and that by expending money in legitimate development the public appropriator could be protected in his rates and the private appropriator protected by his right to continued use.

But now the public appropriators of water for irrigation and power purposes are urging that they may capitalize their priority and that, although they have been required to pay nothing for the right to take the water, the generosity of the public in giving it to them instead of selling it to them shall be capitalized.

In the case of *McCrary v. Beaudry*, 67 Cal. 120, 7 Pac. 284, the Supreme Court of California laid down the following rule:

Whenever water is appropriated for distribution and sale, the public has a right to use it; that is, each member of the community, by paying the rate fixed for supplying it, has a right to use a reasonable quantity of it in a reasonable manner. Water appropriated for distribution and sale is *ipso facto* devoted to public use, which is inconsistent with the right of the person so appropriating it to exercise the same control over it that he might have exercised if he had never appropriated it.

In the case of *San Diego v. National City* (C. C.) 74 Fed. 79, the water-right valuation was denied. Circuit Judge Ross said:

One of the objects of the present suit is to obtain a decree establishing the validity of that claim of the complainant to exact a sum of money, in addition to an annual charge, as a condition on which alone the complainant will furnish consumers the water for irrigation purposes other than those to whom it had furnished it for such purposes prior to December 18, 1892. And the contest that arose between the consumers and the company over this charge for a so-called water right and the refusal of the municipal authorities of National City to allow that charge in respect to acreage property within the city limits is one of the principal causes of the present suit. It does not change the essence of the thing for which the complainant demands a sum of money to call it a water right, or to say, as it does, that the charge is imposed for the purpose of reimbursing complainant in part for the outlay to which it has been subjected. It is demanding a sum of money for doing what the Constitution and the laws of California authorized it to appropriate water within its limits, conferred upon it the great power of eminent domain and the franchise to distribute and sell the water so appropriated, not only to those needing it for purposes of irrigation, but also to the cities and towns and their inhabitants, within its flow, for which it was given the right to charge

rates to be established by law, and nothing else. No authority can anywhere be found for any charge for the so-called "water" right. The State permitted the water in question to be appropriated for distribution and sale for purposes of irrigation, and for domestic and other beneficial uses, conferring upon the appropriator the great power mentioned, and compensating it for its outlay by the fixed annual rates. The complainant was not obliged to avail itself of the offer of the State, but choosing, as it did, to accept the benefits conferred by the Constitution and laws of California, it accepted them charged with the corresponding burden. Appropriating, as it did, the water in question for distribution and sale, it thereupon became, according to the express declaration of the Constitution, charged with a public use.

In the case of *San Joaquin and Kings River Irrigation Company v. Stanislaw County*, 191 Fed. 875, a water-right valuation of \$1,000,000 was claimed for rate-fixing purposes.

After finding that water acquired by appropriation in California is governed by the statutory rule that "the appropriation must be for some beneficial purpose, and when the appropriator or his successor in interest ceases to use it for such purpose, the right ceases" (Cal. Civil Code, 1411), and after stating that California and most other Western States have by constitutional or statutory provisions declared that "the use of appropriated water is a public use," Circuit Judge Morrow said:

The complainant in this case claims to have acquired by prescription against all riparian owners and by appropriation against the world the right to divert from the San Joaquin River the quantity of water which the evidence shows it has diverted into and through its canals for more than five years, to wit, 1,350 cubic feet of water per second. The claim, as stated, is manifestly not sufficient to state a right of diversion. It must appear, further, that the complainant is either the owner of land for which the water is being appropriated for a beneficial use, or that the water is being diverted for the purpose of being carried by the complainant to consumers who own land for which the water is being appropriated for a beneficial use, and that the water is being so used. The complainant in this case is not the owner of any land for which the water is being appropriated. The complainant's right to divert the water of the river is therefore based upon and is measured and limited by the beneficial use of certain consumers for which the water is being appropriated. But, if the amount required by these consumers for a beneficial use is not 1,350 cubic feet of water per second, then complainant has no right to divert that quantity of water; or if, for example, these consumers require only 100 cubic feet per second for beneficial use, then that would be the basis and measure and limit of complainant's right to divert water from the river, and not the capacity of complainant's headworks, canals, and ditches used in making such diversion. The water right must, therefore, be the right of the consumer and attached to his land, and not the right of the complainant attached to its canal system. It follows that, under the law of this State, it cannot be valued as a property right upon which the complainant is entitled to an income from the water rate to be paid by the consumer. I do not overlook the fact that the right of the carrier to divert water from a running stream has been recognized in this State in some instances as a water right vested in the carrier, and that valuations of such supposed rights have been admitted by the consumers; but the consumers have not admitted that right in this case, and, as I do not find it established by law, and the evidence is not sufficient to make it a law growing out of custom, I conclude that it is not a right that complainant is entitled to have valued as its property right in this case.

It is to be said in passing that the law covering the appropriation and regulation of water in Nevada, approved February 26, 1907, and as amended March 22, 1913, is practically the same as that of California. The Act provides that "water may be appropriated for beneficial use," and thereafter defines the right to its continued use by the following provisions (Chap. 140, Stats. 1913):

SEC. 2. Beneficial use shall be the basis, the measure and the limit of the right to the use of water.

SEC. 5. When the necessity for the use of water does not exist, the

right to divert it ceases, and no person shall be permitted to divert or use the waters of this State except at such times as the water is required for a beneficial purpose.

SEC. 6. The beneficial use of water is hereby declared a public use, and any person may exercise the right of eminent domain to condemn all lands and other property or rights required for the construction, use and maintenance of any works for the lawful diversion, conveyance, and storage of waters.

The foregoing court rulings on the law of water appropriation and regulation in California, and covering specifically the question of water-right value, seemingly preclude this Commission from allowing any unearned increment value to cover water rights appropriated under the laws of California.

Moreover, after careful review of the laws covering the appropriation of water in both California and Nevada, we have reached the conclusion that the public should not be obligated to pay a return upon more than the *bona fide* investment value of a developed water right. This for the reason that the water right was originally a grant from the public without payment therefor or restriction on the freedom of its highest development and use, and also because the State has dedicated such property to beneficial public use.

It therefore follows that the unearned increment water-right value (\$1,186,615) claimed in this case should be denied, and that the calculation of just and reasonable rates to the public, covering the water-power right, should be based upon the investment value of the said right shown by Table E (\$1,463,134).

CONSIDERATION OF THE APPRAISEMENT GENERALLY

Keeping in mind that respondent's plant is now, and has been since its beginning, in successful operation, that it is not oversized in capacity, that it is practically free from obsolescence, and that it is maintained at a high standard of physical and service efficiency, it now remains to analyze the appraisement of respondent's tangible property, and determine whether or not it represents the fair value of said property. If the plant was oversized in capacity, or inefficient because of obsolescence and heavy depreciation, due to lack of proper adaptation and maintenance, or if the business had failed to pay a fair return upon the investment during the early years of the enterprise, or if the volume of business was insufficient to pay a full return upon the investment by the maintenance of just and reasonable rates to the public, there would be presented for consideration and treatment questions which do not arise in this case.

The question to be determined, in every rate case that comes before the Commission, is the "fair present value," or, stated differently, to obtain a valuation at the time of the inquiry that will be just and fair alike to the utility and the public, under the special facts and circumstances in each particular case.

In determining fair value, and also fair return, no hard-and-fast rules can be laid down that will govern in every case; this for the obvious reason that one property may be exceptionally well designed and located, and of such a character that it can be operated at comparatively small cost, and earn a fair return, while, on the other hand, another property having the opposite characteristics, and being poorly designed and located, or expensive in operation due to inefficient plant units or changed business conditions, may not permit the earning of a fair return upon the full amount of the investment.

The "original cost method" adopted in the appraisal before us, or in fact any other cost method which may be adopted, must fairly present the cost of the property now in existence. There is a mistaken conception that "original cost" includes the accumulative cost from the time the property was first constructed, and therefore necessarily includes the cost of much property which is either obsolete or long since worn out or destroyed. Manifestly, our railroads or other long-life utilities are composed of certain units which have been replaced many times in the past, and it would therefore be unjust to bring the accumulated cost of these destroyed units into the calculation for the purpose of reaching the present value of the property at the time the inquiry was made.

This question was raised and definitely settled in the *Knoxville Water Case*, 212 U. S. 1, where it was contended that the entire cost of representing "complete depreciation" should be added to the present value of surviving parts of the plant to reach the aggregate value upon which the company should be entitled to a fair return. "Complete depreciation" was defined by the company as that part of the original plant which had entirely disappeared through use and obsolescence. In

passing upon this point, Justice Moody, speaking for the court, said: "The court [below] refused to approve this method, and we think properly refused."

The fairness of this conclusion is apparent when it is remembered that the rule under public regulation is to allow the utility such rates as will, in addition to a fair return upon its property, enable it to establish depreciation reserves from earnings sufficient in amount to cover the losses accruing from the replacement of old or obsolete units of the plant. (*Knoxville Water Case*, 212 U. S. 1.)

What Mr. Gillette therefore endeavored to do in the appraisal before us was to ascertain the original cost of the plant now being used and useful in the Nevada service, and this without the inclusion of the cost covering obsolete or worn-out units which may have passed from use.

The method of determining original cost is practically the same as reproduction cost (new), except that in the case of original cost there may be, and usually is, applied several average unit costs, varying in amounts according to the period during which particular portions of the plant were constructed, whereas, for reproduction cost, there is but one average unit cost applicable to all units of the same kind.

A careful study of the appraisal discloses that the unit costs applied by Mr. Gillette to the various units of the plant are in every instance fully adequate. Comparing these unit costs with those found by the engineering department of this Commission, in the valuation of certain other utility properties in the State, they are, upon the average, substantially higher. The difference, however, does not arise because the Gillette unit costs are unfairly determined or unreasonable *per se*, but, instead, because of the inclusion of excess cost to cover certain material and transportation, claimed for the reason that large sections of the plant were constructed during high-price periods.

It is also to be noted that there has been added overhead charges, amounting to 29 $\frac{1}{4}$ per cent, to that portion of respondent's physical property designated by items 1 to 21, inclusive, and item 34 of the appraisal, Table D.

Subdivided, these charges are as follows:

Engineering and superintendence	5.00 per cent
Business management	5.00 per cent
Legal, general expense, and taxes	1.65 per cent
Interest during construction	5.58 per cent
Brokerage fees	5.86 per cent
Contingencies	6.16 per cent
Total	29.25 per cent

The value of the physical property to which the above overhead factors have been applied is \$2,340,293 and the amount produced thereby is \$684,510.

A reasonable amount should fairly be allowed for overhead charges, but the above percentages are clearly excessive. Mr. Gillette testified that there is ordinarily allowed, in making appraisements of this nature, an overhead charge ranging from 10 to 30 per cent.

The Wisconsin Commission allows 12 per cent in the valuation of utility properties, made on the reproduction (new) basis, whereas the Public Service Commission of the State of Washington allows 15 per cent.

In the valuation of the railroads of Washington, made by Mr. Gillette for the Railroad Commission of Washington, he allowed overhead charges amounting to 12 per cent. No allowance was made for contingencies in this appraisal, for the reason, as explained by Mr. Gillette, that a detailed examination was made of the records of the company to find the original cost, and therefore an allowance for contingencies became unnecessary.

The Railroad Commission of South Dakota, in making a reproduction valuation (new) of its railroads in 1910, allowed 13.7 per cent for overhead charges.

The Oklahoma Commission, in making a reproduction valuation (new) of its utilities, allows between 10 and 15 per cent.

In view of the fact that, as before shown, the unit costs applied by Mr. Gillette are ample to cover the original cost of the physical property, it is obvious that the overhead charges should be conservative. Ordinarily the same necessity should not exist for as high a percentage in overhead factors when the "original cost method" of valuation is used as when the "reproduction (new) method" is used, or when an estimate is being made to cover the cost of new construction. This is for the reason that, in applying the original cost method, the engineering and accounting records are closely followed and actual costs applied as nearly as may be, whereas, in making an estimate for new construction or to reproduce (new) property already constructed, the overhead expenses may be, and usually are t.

a considerable extent, unknown, and there is therefore latitude for a wider range in estimating the percentages which should apply.

In fact, it is not unreasonable to say that a utility should be able to substantiate its claim for overhead allowances by actual vouchers where the "original cost method" is followed, in presenting the value of the property. This would eliminate from the realm of speculation and expert opinion the necessity of estimating these costs, based largely upon hypothetical conditions.

Keeping in mind, however, that Nevada is, speaking generally, a higher cost country than other sections of the United States, and that the engineering and accounting records of many utilities prior to the creation of the Public Service Commission were poorly audited, thus making it difficult and often impossible to report the actual costs, the Commission, actuated by a desire to be fair, will make an allowance of 17½ per cent for overhead costs in all cases where they are not actually determined.

Subdivided, these costs are as follows:

Engineering and administration.....	7.5 per cent
Legal, general expense, and taxes.....	1.5 per cent
Interest during construction.....	4.0 per cent
Contingencies.....	2.5 per cent
Brokerage fees.....	2.0 per cent
Total.....	17.5 per cent

Applying these factors to the physical or inventory valuation (\$2,340,293, items 1 to 21 and 34), in the progressive order shown by appraisal, the overhead cost will be \$412,646, instead of \$684,510, or a reduction of \$271,864 from the above amount claimed by respondent.

DEPRECIATION

Under the recent decisions of the United States Supreme Court, the rule is now well established that depreciation shall be deducted from cost (new) in determining the fair present value of public utility properties for rate-fixing purposes.

In the *Knoxville Water Case*, 212 U. S. 1, Justice Moody said:

The cost of reproduction is one way of ascertaining the present value of a plant like that of a water company, but that test would lead to obviously incorrect results, if the cost of reproduction is not diminished by the depreciation which has come from age and use.

And again, in the *Minnesota Rate Case*, 230 U. S. 352, after refusing to concur in the findings of the court below, that depreciation was offset by appreciation of various kinds, Justice Hughes said:

The realization of the benefits of property must always depend in large degree on the ability and sagacity of those who employ it; but the appraisalment is of an instrument of public service, as property, not the skill of the users. And when particular physical items are estimated as worth so much new, if in fact they be depreciated, this amount should be found and allowed for. If this is not done, the physical valuation is manifestly incomplete. And it must be regarded as incomplete in this case. (*Knoxville v. Knoxville Water Co.*, 212 U. S. 1.)

Depreciation in plant value, considered here, is defined as the wasting value in perishable property, due to age, wear and tear, and obsolescence. It began from the moment each section of the plant was constructed and placed in operation. It is fairly estimated that the wearing value decreases uniformly each year during the assumed life of the property. Since this is true, it follows that depreciation annuity should be determined and allowed on the "straight-line" basis, in order to fully provide for renewals or replacements, as distinguished from maintenance expenses, and for any other physical or functional requirement that may arise. It will be so treated in this case.

The valuation report shows that the value of respondent's depreciable property is \$3,583,554, and that the average life thereof is approximately twenty-nine years. Following this it is shown that the straight-line depreciation factor is 3.46 per cent, and that the depreciation for 1912 amounted to \$123,990. Further, after showing that the age of the perishable property in use December 31, 1912, ranges from three to five and one-half years, Mr. Gillette estimates that the total accrued depreciation in the value of the property is \$398,155.

RECAPITULATION OF VALUE

The table following shows the net total value of the respondent's property, after allowing for deductions hereinbefore noted, in unearned increment water-right value, overhead costs, and accrued depreciation:

TABLE G

Total valuation claimed by respondent (from Table D-1)	\$5,175,619
Deductions:	
Unearned increment water-right value	\$1,186,615
Overhead costs	271,864
Accrued depreciation	398,155
	<u>1,856,634</u>
Net total valuation	\$3,318,985

PRESENT RATES

The rates under review in this proceeding are disclosed by setting forth below a copy of respondent's lighting and power schedule lawfully published, and filed with the Commission July 25, 1913, to become effective August 1, 1913:

THE NEVADA-CALIFORNIA POWER COMPANY—RATE SCHEDULE NO. 3

Lighting and power rates applying in Goldfield, Tonopah, Rhyolite, Pioneer, Bonnie Clare, Blair, Silver Peak, Millers, Manhattan and Round Mountain, Nevada

LIGHTING RATES SCHEDULE 3A

Short-Hour Service. Residences, Early Closing Stores, Etc.

Monthly consumption of—

50 KWH or less	20c per KWH
Over 50 KWH up to and including 100 KWH	18c per KWH
Over 100 KWH	15c per KWH

Long-Hour Service, Hotels, Saloons, and Other All-Night Service

Monthly consumption of—

Over 50 KWH up to and including 100 KWH	15c per KWH
Over 100 KWH up to and including 200 KWH	13c per KWH
Over 200 KWH up to and including 300 KWH	11c per KWH
Over 300 KWH up to and including 500 KWH	9c per KWH
Over 500 KWH up to and including 1,500 KWH	7.77c per KWH
Over 1,500 KWH up to and including 5,000 KWH	6.66c per KWH
Over 5,000 KWH	5.55c per KWH

Discount: All the above rates subject to 10% discount if paid on or before the 10th day of the month next following the month of service.

No Discount will be allowed unless bills are paid in full as above specified.

Minimum Charge: \$2 per month or fraction thereof. No discounts allowed on minimum charges.

COOKING AND HEATING SERVICE SCHEDULE 3B

Where special meter is installed 5c per KWH

Discount: Subject to 10% discount if paid on or before the 10th of the month next following the month of service.

No Discount will be allowed unless bills are paid in full as above specified.

Minimum Charge: \$2 per month or fraction thereof. No discount allowed on minimum charges.

SMALL MOTOR SERVICE SCHEDULE 3C

Applying to small motors, $\frac{1}{2}$ to 7½ HP, rates vary from 18c per KWH to 10c per KWH, depending upon varying load-factor conditions. Minimum charge varying from \$2 to \$20 per month.

RATE SCHEDULE 3D

Rate No. 1—Rates for Mining Service:

For intermittent or hoisting service, \$2 per HP based on the minimum demand, as measured by indicating wattmeter, plus 4c per KWH.

For continuous service for mines and mills (short-term contracts for small consumers): Up to 2,500 KWH per month at 4c per KWH; 2,500 KWH to 8,168.7 KWH per month, 3c per KWH.

Rate No. 2:

For intermittent or hoisting service, also for combined hoist, compressor, pump, and fan, motor service, including electrical energy to be used for lighting of shaft houses and mines: Monthly minimum guarantee of \$1 per connected HP motors.

Monthly consumption—

Up to 500 KWH	8c per KWH
Over 500 KWH up to and including 1,000 KWH	7c per KWH
Over 1,000 KWH up to and including 2,000 KWH	6c per KWH
Over 2,000 KWH up to and including 4,000 KWH	5c per KWH
Over 4,000 KWH up to and including 8,168.7 KWH	4c per KWH
Over 8,168.7 KWH up to and including 13,614.5 KWH	3½c per KWH
Over 13,614.5 KWH up to and including 27,229 KWH	3¼c per KWH
Over 27,229 KWH up to and including 54,458 KWH	3c per KWH

NOTE—The choice of the above rates is optional with the consumer.

NOTE—For large consumers with contract whose total consumption is equal to or in excess of 54,458 kilowatt hours per month (100 HP) the above kilowatt-hour charge is to be modified so that the same will conform to the rates named in "Long-Term Contract for Large Consumers."

RATE SCHEDULE 3E

Rate No. 3—Constant Speed Motors:

Long-Term Contract for Large Consumers

(a) The rate that applies under this schedule is governed by the total monthly kilowatt-hour consumption.

(b) The minimum monthly consumption and payment required being based on percentage of total installed horsepower capacity of motors under continuous operation, depending upon individual load conditions and at rate as per following schedule:

For monthly consumption—	Up to and including	
Over	2,500.0 KWH	3½c per KWH
2,500.0 KWH (4.59 HP)	4,000.0 KWH	3½c per KWH
4,000.0 KWH (7.34 HP)	8,188.7 KWH	3½c per KWH
8,188.7 KWH (15.00 HP)	13,614.5 KWH	3c per KWH
13,614.5 KWH (25.00 HP)	27,229.0 KWH	2½c per KWH
27,229.0 KWH (50.00 HP)	54,458.0 KWH	2½c per KWH
54,458.0 KWH (100.00 HP)	81,687.0 KWH	2½c per KWH
81,687.0 KWH (150.00 HP)	108,916.0 KWH	2c per KWH
108,916.0 KWH (200.00 HP)	136,145.0 KWH	1.85c per KWH
136,145.0 KWH (250.00 HP)	163,374.0 KWH	1.70c per KWH
163,374.0 KWH (300.00 HP)	217,832.0 KWH	1.60c per KWH
217,832.0 KWH (400.00 HP)	326,748.0 KWH	1.50c per KWH
326,748.0 KWH (600.00 HP)	544,580.0 KWH	1.40c per KWH

RATE SCHEDULE 3F

Rate No. 3.—Rates for Mining Service:

Open Contracts for Large Consumers

(a) The rate that applies under this schedule is governed by the total monthly kilowatt-hour consumption.

(b) The minimum monthly consumption and payment required being based on percentage of total installed horsepower capacity of motors under continuous operation, depending upon individual load conditions and at rate as per following schedule:

For monthly consumption—	Up to and including	
Over		
54,458 KWH (100 HP)	81,687 KWH	2.50 per KWH
81,687 KWH (150 HP)	108,916 KWH	2.25 per KWH
108,916 KWH (200 HP)	136,145 KWH	2.05 per KWH
136,145 KWH (250 HP)	163,374 KWH	1.85 per KWH
163,374 KWH (300 HP)	217,832 KWH	1.75 per KWH
217,832 KWH (400 HP)	326,748 KWH	1.65 per KWH
326,748 KWH (600 HP)	544,580 KWH	1.55 per KWH

NOTE.—As consumers holding long-term contracts have first claim on company's service including the right to share pro rata when supply of power is short, therefore electrical energy will be furnished under Rate Schedule 3F, only at such times as the company has the same free for disposal at and for the time required by the consumer.

By way of illustration and for use if necessary the total current generated, including line losses, and the gross earnings for the year ending December 31, 1912, are segregated and shown by the following table:

TABLE H—FOR THE YEAR ENDING DECEMBER 31, 1912

	KWH generated	Per cent of total	Gross earnings	Per cent of total
Lighting service	1,729,000	2.64	\$119,463	13.72
Power service	64,173,000	97.36	761,081	86.28
Total	65,902,000	100.00	\$870,544	100.00

DISCRIMINATION

The discrimination in this case, with particular reference to the power business, is made clear by a check of the meter readings and the bills rendered by respondent to its power users for the months of March and September, 1913. Upon request of the Commission, respondent furnished a detailed report covering the business of the above two months, and in the analysis of same, the Commission having in mind respondent's testimony that practically two-thirds of its power business was being disposed of under contract rates established prior to the creation of the Public Service Commission, made a subdivision of the average rates per KWH charged contract and noncontract users.

This is made clear by the following table:

TABLE I—AVERAGE RATES PER KWH FOR POWER CHARGED CONTRACT AND NONCONTRACT USERS

	March, 1913	Sept. 1913	Average
Average rate per KWH for contract customers	1.29c	1.33c	1.31c
Average rate per KWH for noncontract customers	1.95c	1.92c	1.93c

It will be observed that the average charge per KWH made by respondent to contract power users is 1.31 cents, whereas the charge made to noncontract customers is 1.93 cents, or a differential of 6.2 mills. Thus it will be observed that the noncontract users are required to pay 47.3 per cent more than the contract users.

It is to be noted in passing that section 12 of the Public Service Commission law exempts from regulation contract rates which were established prior to the creation of the Commission. The discrimination, therefore, can be removed only by some readjustment in the rates established for noncontract users, who comprise about one-third of the total power users.

The service is rendered under substantially similar circumstances to practically all users, whether large or comparatively small, and whether contract or non-

contract users. Considered, therefore, from the standpoint of equity and justice, there is really no defense which can be fairly made in support of a scheme of rate-making that produces such unfair and discriminatory results as are shown by the above table.

This discrimination is justified by respondent largely on the ground of quantity of service, and on the theory that the service can be furnished more economically in large than in small quantities. To what extent this principle is justifiable yet remains to be determined. It is, of course, proper that classification of service as between lighting, power, heating, and wholesale service, should fairly be made, but when it comes to a further subclassification within the above heads, care must be taken to see that it is not carried to a point of unreasonable and unjust refinement.

If, as shown in this case and others, the cost of producing and furnishing current at the substation is the same, regardless of the character of the service to which it is thereafter put, and assuming that a small power customer is using 1,000 kilowatts per month under exactly the same conditions as a large customer using 25,000 kilowatts or more per month, it is impossible to see wherein there is any justification for a differential in the rates.

The principle we have in mind can perhaps best be illustrated by referring briefly to the method of classifying and applying rates on the railroads under state and national regulation. For example: "Carload rates may be properly lower than less-than-carload rates; because the service rendered is distinctly different in the two classes of service; but no lower rate can be given to one who sends fifty less-than-carload packages than if he sends only one, and no lower charge can be made to him who ships in ten-carload lots, or indeed in trainloads, than to him who ships in a single car."

The rule is well established that public service corporations must give to the public equal advantages in rates as well as service. A public utility may charge only a reasonable rate, but no rate can be just which is discriminatory or which gives to certain users an undue preference over other users in the same class.

The method of rating adopted by respondent has the effect of requiring the noncontract power customers to carry an unjust and unreasonable burden, and the Commission therefore finds that the power rates are discriminatory, unjust, and unreasonable.

Regarding the lighting rates it is to be said that respondent maintains the highest scale in Nevada, and this notwithstanding that many other companies are forced to produce current by steam and other higher cost methods than that employed by respondent. A comparison of the rates charged by other hydroelectric companies operating in this State, on file in this office and constituting a part of the Commission's official records, and which were admitted in evidence in this case, discloses that respondent's lighting rates are very much higher than those of other hydroelectric companies, especially those operating in the northwestern part of the State. It is of course recognized that conditions generally are different, and that the cost of operation is somewhat higher in the territory served by respondent than that served by the said hydroelectric companies in the northwestern part of the State. But after making due allowance for these factors, and especially the difference in the cost of operation, which is easily susceptible of mathematical demonstration, it is to be said, speaking comparatively, that respondent's lighting rates are unreasonably high.

Aside from the foregoing comparisons, which are referred to merely for the purposes of illustration, the Commission finds, after careful consideration of all the facts in this case, that respondent's lighting rates are excessive, unjust, and unreasonable.

PROPOSED SCHEDULE OF REASONABLE LIGHTING AND POWER RATES

Having duly considered the evidence and proofs submitted in this case, and being fully advised in the premises, the Commission is of the opinion that respondent's lighting and power rates are unjust, unreasonable, and discriminatory, and that for the future they should not exceed the following schedule:

TABLE J—PROPOSED RATE SCHEDULE FOR THE NEVADA-CALIFORNIA POWER COMPANY

<i>Lighting Schedule</i>		
For the first 50 KWH per month.....	9c	per KWH
For the next 50 KWH per month.....	8c	per KWH
For the next 150 KWH per month.....	7c	per KWH
For the next 250 KWH per month.....	5c	per KWH
For the next 500 KWH per month.....	4c	per KWH
For all excess over 1,000 KWH per month.....	3½c	per KWH
Minimum monthly charge.....		\$1.50

Cooking and Heating Schedule

Where special meter is installed.....	5c per KWH
Minimum monthly charge.....	\$1.50

Commercial Power Schedule up to 500 KWH Per Month

For the first 100 KWH per month.....	6c per KWH
For the next 150 KWH per month.....	5c per KWH
For the next 250 KWH per month.....	4c per KWH
Minimum monthly charge.....	\$1.50

Industrial Power Schedule, Also All Other Power Service Which Exceeds a Consumption of 500 KWH Per Month

For the first 1,000 KWH per month.....	3.25c per KWH
For the next 3,000 KWH per month.....	3.00c per KWH
For the next 4,000 KWH per month.....	2.75c per KWH
For the next 6,000 KWH per month.....	2.40c per KWH
For the next 14,000 KWH per month.....	2.25c per KWH
For the next 27,000 KWH per month.....	2.00c per KWH
For the next 27,000 KWH per month.....	1.60c per KWH
For the next 27,000 KWH per month.....	1.40c per KWH
For the next 27,000 KWH per month.....	1.30c per KWH
For the next 27,000 KWH per month.....	1.25c per KWH
For the next 54,000 KWH per month.....	1.20c per KWH
For the next 110,000 KWH per month.....	1.15c per KWH
For all in excess of 327,000 KWH per month.....	1.14c per KWH
Minimum monthly charge.....	25c per connected HP of motors

Meter Deposits

For consumers with monthly bills of less than \$5.....	\$5.00
For consumers with monthly bills of more than \$5, the deposit shall not exceed the monthly bill.	

It is to be noted that the foregoing schedule of rates (Table J) is progressive in its application, that it will afford a reasonable schedule of rates for commercial lighting service, and that, while it will not fully remove the discrimination in the power service, it will afford the consumers, who are not the beneficiaries of contract rates established prior to the enactment of the Public Service Commission law, very substantial relief.

The effect of these rates in respondent's revenue, if made permanent, is made clear by the following table:

TABLE K—EFFECT OF PROPOSED RATES IN THE REVENUES OF THE NEVADA-CALIFORNIA POWER COMPANY, BASED ON THE BUSINESS OF SEPTEMBER, 1913

<i>Classification</i>	<i>Consumption KWH</i>	<i>Actual earnings</i>	<i>Earnings proposed rate</i>	<i>Reduction</i>
Residence use.....	11,858	\$3,306.15	\$2,135.03	\$1,171.12
Business use.....	45,305	4,730.35	3,345.82	1,384.53
Heating use.....	5,961	310.00	310.00	
Street lighting.....	5,300	618.50	618.50	
Contract power.....	3,270,376	41,806.05	41,806.05	
Noncontract power.....	1,588,814	30,503.98	28,986.68	1,517.30
Totals.....	4,927,614	\$31,275.03	\$77,202.08	\$4,072.96
For one year on above basis.....	59,131,368	\$975,300.36	\$325,424.96	\$48,875.40
Net income 1912, Table B.....				\$619,848
Less above estimated reduction under proposed rates.....				48,875
Net income, 1912, under proposed rates.....				\$570,973
Net total valuation of respondent's property, Table G.....				\$3,304,839
Net income return on above valuation.....				17.28%

BARTINE, Chief Commissioner, concurring:

I am not able, fully, to concur in all the views expressed in the opinion written by First Associate Commissioner Shaughnessy. In the main, we are in accord, and I agree with the conclusions as to rates reached in my associate's opinion, which is able, exhaustive, and represents a great deal of earnest effort on his part.

I cannot, however, agree with the views expressed in that opinion to the effect that the respondent company's water right is not a thing of value to be considered by the Commission in determining this case. It seems to me that my associate has been misled in his views upon this point by a failure on his part fully to grasp the significance of the cases which he has cited and quoted from at length, and by his further failure to distinguish between the peculiar provisions of the Constitution of the State of California relative to the rights of water companies engaged in the distribution and sale of water, and the constitutional and statutory provisions existent in the State of Nevada.

My associate assumes, at the outset, that there is an analogy between a franchise and a water right. To a certain extent there is, but the very authorities to which he refers clearly recognize the fact that a franchise is property and that it should be considered in determining the value of the investment upon which a public service corporation is entitled to earn a fair return. It is suggested in the

opinion by Commissioner Shaughnessy that, as a rule, the courts have held that franchises have no value for rate-making purposes. But he says that the case of *Willcox v. Consolidated Gas Company*, in the 212 U. S. 19, is an exception to the rule. So far from such being the case, as I have read the authorities, the Willcox case in the 212 U. S., *supra*, is not an exception to the rule, but *states* the rule. And, what is of the first importance in this case, it is a rule established by the highest tribunal in this country, viz, the Supreme Court of the United States.

In the case of *Willcox v. Consolidated Gas Company* the court distinctly recognized the fact that the franchise was property and that it had a value to be considered for the purposes of rate-making. All that the court said which points towards sustaining my associate's contention, is that there was no evidence in the case that justified the lower court in allowing an *increased* valuation for the franchise over and above that which had been given to it at an earlier date. The increased valuation, from more than seven millions of dollars to twelve millions of dollars, was based simply upon the reasoning of the court below that the value of the franchise should increase pro rata with the increase of the business. This, though, was rejected by the Supreme Court, and, as I think, properly.

If we turn to page 44 of the volume mentioned, we find this language:

It cannot be disputed that franchises of this nature are property, and cannot be taken or used by others without compensation. (Citing *Monongahela Company v. United States*, 148 U. S. 312; *People v. O'Brien*, 111 N. Y. 1, and cases cited.) The important question is always one of value.

From the foregoing, it will be seen that the Supreme Court of the United States had previously decided the same question the same way and that the highest court in the great State of New York, a court second in dignity only to the Supreme Court of the United States, had done the same.

In his decision of the Spring Valley Water case, Judge Farrington distinctly recognized the fact that the franchise of that great company was of value, and might properly have been included in the aggregate valuation of its properties, but no evidence had been offered showing clearly what the value of the franchise was. Consequently the claim for value upon that head was rejected. (192 Fed. 137.)

Now, let us look for a moment at the decisions rendered by Judges Ross and Morrow in cases arising under the Constitution and laws of California. These two cases practically cover the entire question, so far as it has been passed upon in our sister State. In the case referred to by my associate, decided by Judge Ross, viz, *San Diego Land and Town Company v. City of National City*, appearing in 74 Fed. beginning at page 79, we find on page 80 a quotation of the California constitutional provision which governed in that case. The citation reads, in part, as follows:

The use of all water now appropriated or that may hereafter be appropriated for sale, rental, or distribution, is hereby declared to be a public use and subject to the regulation and control of the State in the manner to be prescribed by law; provided, that the rates of compensation to be collected by any person, company, or corporation in this State for the use of water supplied to any city and county, or city, or town, or the inhabitants thereof, shall be fixed annually by the Board of Supervisors of city and county, or City or Town Council, or other governing body of such city and county, or city, or town, by ordinance or otherwise, in the manner that other ordinances or legislative Acts or resolutions are passed by said body, and shall continue in force for one year and no longer. * * *

The remainder of the quotation simply deals with the procedure by the municipal authorities and is not material for the proper consideration of the question here presented.

Under the foregoing provision, both the Federal Judges and the State Courts have held that a water company, appropriating water solely for the purposes of distribution and sale, acquires no interest in the water, and that its right to divert water for the uses and purposes named is simply a franchise. Consequently, in the cases referred to, the courts did not hold that a company owning a water right, giving to that term its legal significance, might not be permitted to fix a value upon that water right for any purpose whatsoever.

The principle embodied in the California Constitution, as interpreted by the courts, places a company appropriating water simply for distribution and sale

in that State in exactly the same position as that of a company operating in a State where the riparian law prevails, which company has received a charter or franchise from competent authority allowing it to divert the waters of a running stream from its natural channel to the detriment of the riparian owners. The basic principle of riparian law is that the waters of a stream shall be permitted to flow undisturbed in their natural channel, and not be diverted in such manner as to injure the owners of the adjacent lands.

In this western section, however, where the climate is arid, where irrigation is needed, and where it is necessary for various purposes to divert waters from their natural channels, and carry them long distances to places where they may be put to beneficial use, the riparian law has been abandoned and the law of appropriation substituted therefor. Under the law of appropriation any person, firm, or corporation may appropriate the unappropriated waters of any running stream and put the same to any beneficial use. The measure of the use is the measure of the right.

There is a striking analogy between the appropriation of water for beneficial purposes and the location of a mining claim. Neither the appropriation nor the location gives to the party claiming thereunder the absolute ownership in fee. Under the appropriation laws lawful possession of the water is dependent upon its being used for some beneficial purpose. Under the mining location laws the possession of the mining claim is dependent upon the performance of a certain amount of development work upon the claim each year. As long as these conditions are performed, the appropriator of the water and the locator of the mining claim are fully protected by law in the possession of the respective properties. A water right is not an intangible thing, but is in the highest degree tangible. A water right without water would be worth simply nothing at all. There can be no such thing as a water right without water, and water is not only property of a substantial nature, but it is included in the class of the highest grade of property, viz, real property, and, in its possession, transfer, and enjoyment, is governed generally by the same laws as those applying to land.

Nowhere in any of the California decisions can be found any statement to the effect that a water right, within the meaning of the law, is not a thing of value. In the cases referred to the decision of the courts was that the water companies had no water rights but simply franchises to render a service. Water companies engaged solely in the business of distributing and selling water are referred to as agencies. The ownership of the water is regarded as being still in the people and the companies as being merely invested with the franchise right of taking the water from its natural channels and delivering it to the people at reasonable prices for the service rendered.

The very last paragraph of the decision rendered by Judge Morrow reads as follows:

That, under the law of this State, and the authority of *Willcox v. Consolidated Gas Company*, 212 U. S. 19, 29 Sup. Ct. 192, 53 L. Ed. 382, the complainant is entitled to have its franchise valued by the Boards of Supervisors of the counties of Stanislaus, Merced, and Fresno, as a part of complainant's property used and useful, in the appropriation and distribution of water to the inhabitants of those counties, but there is no evidence before the court upon which such valuation can be made in this case, nor is there evidence upon which the court can value complainant's property as a "going concern." It follows that, as complainant's net income is in excess of 6 per cent (the minimum fixed by statute) on the estimated figure of the complainant's property, used and useful in the business in which it is employed, the complainant has no cause of action, and the bill must be dismissed.

From the foregoing it will be seen that Judge Morrow distinctly recognized the fact that the franchise of a company was a thing of value and might fairly have been considered in the case if any satisfactory evidence had been offered showing what the value was. It goes without saying that the franchise would have been entirely valueless if there had been no water available for the company.

The extract given above from the California Constitution shows that the provision relates simply to companies engaged in the distribution and sale of water—that appropriate water for such purposes and none other. It is hardly necessary to say that the respondent company in this case does not come within that class. Its water is not being distributed for sale, but is used for the generation of electric current. The respondent company has established what is to all intents and

purposes a manufacturing establishment, and without the water power, or some equivalent, the establishment would have no value for the purposes for which it is intended.

It is a well-known fact that, as a rule, water power is much less expensive than power which is created by the use of fuel. There is no reason to doubt that this is true with respect to the case now under consideration. I do not believe that any court in Nevada, either state or federal, will hold that a water right used for purposes of generating power, or for any other beneficial purpose, is not of some value, which value is to be taken into the equation in determining the capitalized amount upon which the utility is entitled to a fair return.

In the recent case of *Tonopah Water Company v. Public Service Commission of Nevada* the attitude of Judge Morrow with respect to the value of water rights was made entirely clear. The case of *San Joaquin and Kings River C. & I. Company v. Stanislaus County*, in 191 Fed., was decided about two years before the hearing was had in the Tonopah water case. And yet at no stage of the proceeding did Judge Morrow utter a word which gives the slightest support to the theory that the water rights of a public service corporation are not to be considered as of value. In his revised opinion that distinguished and learned judge accepts, as intrinsically sound, my own contention, made when acting as counsel in the case, that the Tonopah Water Company had no "water right" within the meaning of the law; that the only water it possessed was percolating water, and, as such, a part and parcel of the soil. The Court held substantially in accordance with this view, and further held that there was no evidence that the Court could consider, proving the value of the water considered as a water right. But running all through the Judge's remarks when engaged in colloquy with the attorneys, as well as through the final opinion, was a clear indication of the view that a water right was a thing of value, properly to be considered when its value was clearly shown. The trouble in that case was that all the evidence offered by the water company went to the value of a water right, *per se*, while it was made very apparent that there was no such water right, but that the company was simply the owner of a piece of ground saturated with water.

Referring briefly to the quotation given from an opinion rendered by Commissioner Eshleman of the California Commission, I may say that I have a very high regard for Commissioner Eshleman's ability, as well as for his integrity of purpose. It seems to me, though, that the language used by him in the quotation given by my associate is altogether too general to be of much value for the purposes of this case. It was rather in the nature of *dictum*, and an examination of the entire case with which he was dealing shows that it was decided upon altogether different grounds. Moreover, the language of Commissioner Eshleman must be considered with respect to the California Constitution and laws. I am not prepared to accept that statement as correct in its application to conditions existing in Nevada or with reference to water rights generally in California. The fact that the respondent company's water power is located in California does not, in my judgment, affect the principles involved in this case. The company is rendering the service with which we are dealing within the State of Nevada, and in the rendering of that service it is subject to Nevada law, and not the law of the State of California.

On page 34 of my associate's typewritten opinion are given a number of quotations from the general water law of this State. These quotations do not touch the important point at issue. Let me quote further: Section 1 of chapter 140, Statutes of 1913, reads as follows:

SECTION 1. The water of all sources of water supply within the boundaries of the State, whether above or beneath the surface of the ground, belongs to the public.

SEC. 2. *Subject to existing rights*, all such water may be appropriated for beneficial use, as provided in this Act, and not otherwise.

Particular attention is directed to the fact that all existing rights are expressly preserved and protected, and this was true of the old law upon our statute books before the Act of 1913 was passed.

Section 59 of the Act in question prescribes the manner and the purposes for which the public waters of the State of Nevada may be appropriated. With reference to what the application shall contain, we find the following language:

In addition to the foregoing the application shall contain, if for irrigation purposes, except in case of application for permit to store water, the number of acres to be irrigated, and a description, by legal

subdivisions, of the lands to be irrigated; if for power purposes the vertical head under which the water will be applied, the location of the proposed power-house, and, as near as may be, the use to which the said power is to be applied; if for municipal supply, or for domestic use, the approximate number of persons to be served and the approximate future requirements; if for mining purposes the proposed method of applying and utilizing the water; if for stock-watering purposes the approximate number and character of animals to be watered; if for any purpose contemplating the storage of waters, in addition to the information required in applications naming the said purpose, it shall give the dimensions and location of the proposed dam, the capacity of the proposed reservoir, and a description of the land to be submerged by the impounded waters.

The foregoing shows plainly that the public waters of the State may be appropriated for a number of different purposes, including municipal supply and domestic use. There is no suggestion of any difference of right or title to the water because of the difference in the use to which it is to be put. All come within the general category of beneficial uses.

In this connection I may now call attention to the fact that the Public Service Commission derives none of its jurisdiction from the general water law of the State. Its jurisdiction is conferred solely by the public service law. That law also recognizes the fact that water may be used by public utilities for a number of different purposes, and here again we are confronted by the fact that no distinction is made with respect to the uses to which the water is to be put.

I may now go a step farther and direct attention to the fact that the California constitutional provision deals not with public utilities, but with the water itself, specifically providing that "the use of all water now appropriated or that may hereafter be appropriated for sale, rental or distribution, is hereby declared to be a public use." On the other hand, our statute does not purport to give the Public Service Commission general jurisdiction and control of the public waters of the State. The Commission is simply invested with jurisdiction over the utilities which may use such waters.

In view of these facts it seems to me that there is no avoiding the conclusion that a water right used for the purpose of supplying a community with water is just as much a thing of value as if that water were used in some other way.

At this point I may properly add that in the Spring Valley case Judge Farrington allowed \$2,100,000 as the value of the company's water rights. This was less than the amount claimed by the company, but it is nevertheless a very substantial sum in itself. A glance at the summary of property values given by the court, beginning on page 175 of volume 192 of the Federal Reporter in which the case appears, will show that the total valuation allowed was something more than \$25,000,000. This included everything in the way of reservoirs, dams, lands, pipe lines, surface structures, and buildings of all kinds, and also, as I have said, the modest little amount of \$2,100,000 for water rights.

In deciding this case Judge Farrington does not assume to take issue with Judges Ross and Morrow in the earlier cases. I therefore conclude that in allowing a value of \$2,100,000 for water rights, he recognized the fact that the case differed upon that point in essential principle from those decided by Judges Ross and Morrow.

As I view it, the doctrine that a water right has no value to be considered in rate-making can only be applied, even in California, in a case where the water was appropriated for the sole purpose of distribution and sale; the theory being that the water primarily belonged to the public and was simply taken up for distribution to the public, the primary owner, hence that the public should not be made to pay a return upon the value of the water of which it, the public, was the primary owner. But when water is appropriated for any other beneficial use, it at once passes into private ownership and acquires a commercial value. For example, suppose a man appropriates a sufficient quantity of water to irrigate a thousand acres of land, and uses it for that purpose. Clearly his water right is a thing of value. Later a town or village springs up near by. This town or village needs water for domestic purposes. The owner of the water acquired for irrigation concludes that he can use it more advantageously in supplying the town with water. Accordingly he establishes a water system for its distribution. Will it be seriously contended that by changing the use he deprives that water of value? Obviously, a value having been once attached to the water right it cannot be destroyed by a mere change of use.

The water rights of the respondent company in this case were not acquired for the purpose of distributing and selling the water to the public. They were secured primarily for power purposes, and some of them at least were purchased at considerable cost. It surely would not be necessary in any event for a public utility to buy a water right and pay a large sum of money for it, unless it were a thing of value. Just how much it is worth, and just how much it may increase in value from the original purchase price, will depend upon the facts and circumstances of each particular case. What I am combatting now is the theory that the water rights of this company have no value at all above the cost of development, which is the contention made in the opinion written by Mr. Commissioner Shaughnessy. If this case were to turn upon the value of the water rights *per se*, it is self-evident that we could never sustain in the Federal Court the proposition that such water rights have no value at all.

It is apparent at a glance that the California constitutional provision, upon which the cases in that State were decided, does not apply to a company like the respondent in this case, but only to water companies that are acting merely as agencies for the distribution and sale of water. The very circumstance that the California Constitution singles out waters used in this particular way, and makes them the subject of a special provision, clearly indicates that, in the judgment of the framers of that constitution, water companies organized for the sole purpose of distributing and selling the public waters of the State, were exceptional in character, stood upon a footing peculiarly their own, and should therefore be treated differently from other owners and users of water.

Without amending the Constitution of this State, our Legislature would have no power to enact such a provision as the one quoted from the Constitution of our sister State. That provision not only deals with water rights to be acquired but to those already acquired. It is given retroactive effect so as actually to destroy, in a measure, rights that may already have vested in private individuals, companies, or corporations. A state constitution being the organic law, and the supreme law of a State, may do this, but a mere statute unauthorized by a constitutional provision cannot.

It is not necessary to go at greater length into this question, because there is no suit pending between my associate and myself, involving a question of whether a water right is a thing of value, to be considered as a part of the investment of a public service corporation. I have not attempted to exhaust the subject. I have simply gone far enough into the matter to indicate clearly why I think my associate's rejection of the water right, as an increment of value in the mass of the respondent's property, is erroneous. I have done this because I do not feel that the Commission can safely or justly take such a position. Millions of dollars have been expended in this State in litigation over disputed water rights. It is idle to suppose that this would have been done had those water rights no money value. The laws of this State do not distinguish between the appropriation of water by a public utility, and an appropriation by an individual, while the California Constitution and statutes do, with respect to *water* companies.

So far as the title to the property is concerned, and so far as its value goes, there is not, and cannot, in my judgment, be any difference between a water right owned by a public utility and a water right owned by a private individual or concern. The only difference in law is that the rates and charges of the public utility are subject to regulation and control by the Public Service Commission, but that does not in any way affect the question of whether the water right has value or not.

As I have already intimated, I do not feel that in taking the position that no value should be allowed for a water right used by a public utility for any purpose, we would be on safe ground. In a close case it might very easily prove fatal and result in an order based upon such theory being declared void, as a result of which our labors in that particular case would be in vain and the people would derive no benefit therefrom. It is sound policy for us to keep within the recognized lines of the law. This gives us a sufficiently broad field in which to operate and render service of great value to the people. It is not wise for us to run after strange gods and invoke new doctrines which are very likely to be held unsound by the courts in which the cases are tried. If a case were to arise which compelled us to take independent action along new lines, that would be a different thing, but, where the law is settled, and when acting within the recognized principles of the law as laid down by the courts we see that we can secure a very substantial measure of relief, it is not, in my view, good policy for us to attempt to make new law and take the chance of having our action declared

void, the effect of which would be to throw us right back to the point from which we started.

In this case, I join with my associate in the conclusions reached with respect to the rates that ought to be established, because, upon the closest calculations that I am able to make, we may allow the company the full value claimed for its water right, and, at the same time, the rates as prescribed will leave a fair return upon the entire valuation.

In saying what I have upon this point, I do not wish to be understood as accepting Mr. Gillette's estimate of the value of the water right. In the Willcox case, to which reference has been made, the Supreme Court of the United States adverts to the uncertainty that attaches to the estimates of experts concerning property valuations. That uncertainty is even more strikingly in evidence when we come to deal with the value of a water right situated, as this one is, in the midst of the Sierra Nevada Mountains, far removed from great centers of population. Mr. Gillette's estimates are based largely upon comparisons which are not parallel so far as conditions are concerned, and upon theories which, as I view it, do not fairly apply to conditions surrounding the operations of the respondent in this proceeding. I do not feel that either a commission or a court is under any obligation always to take the estimates of an expert at their full face value, and especially not when dealing with property such as a water right, far distant from other property of a like character, and where there is little or no similarity of circumstance and condition.

I am authorized to say that Mr. Commissioner Simmons, while approving the schedule of rates prescribed by the order in this case upon the ground that they are reasonable *per se*, nevertheless concurs in the view herein expressed, that the water rights of the respondent company are elements of value proper to be considered in the fixing of the rates which it may be permitted to charge.

ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA, January 29, 1914.

Present—Chief Commissioner Bartine, First Associate Commissioner Shaugnessy, Second Associate Commissioner Simmons, and Secretary Walker.

Pursuant to the conclusions reached in the foregoing opinions, it is hereby

Ordered, That on or before March 5, 1914, the Nevada-California Power Company publish and put into effect the following schedule of rates, namely:

LIGHTING SCHEDULE

For the first 50 KWH per month.....	9c	per KWH
For the next 50 KWH per month.....	8c	per KWH
For the next 150 KWH per month.....	7c	per KWH
For the next 250 KWH per month.....	5c	per KWH
For the next 500 KWH per month.....	4c	per KWH
For all excess over 1,000 KWH per month.....	3½c	per KWH
Minimum monthly charge.....\$1.50		

COOKING AND HEATING SCHEDULE

Where special meter is installed.....	5c	per KWH
Minimum monthly charge.....\$1.50		

COMMERCIAL POWER SCHEDULE

Up to 500 KWH per Month

For the first 100 KWH per month.....	6c	per KWH
For the next 150 KWH per month.....	5c	per KWH
For the next 250 KWH per month.....	4c	per KWH
Minimum monthly charge.....\$1.50		

INDUSTRIAL POWER SCHEDULE

Also All Other Power Service Which Exceeds a Consumption of 500 KWH per Month

For the first 1,000 KWH per month.....	3.25c	per KWH
For the next 3,000 KWH per month.....	3.00c	per KWH
For the next 4,000 KWH per month.....	2.75c	per KWH
For the next 6,000 KWH per month.....	2.40c	per KWH
For the next 14,000 KWH per month.....	2.25c	per KWH
For the next 27,000 KWH per month.....	2.00c	per KWH
For the next 27,000 KWH per month.....	1.60c	per KWH
For the next 27,000 KWH per month.....	1.40c	per KWH
For the next 27,000 KWH per month.....	1.30c	per KWH

For the next 27,000 KWH per month.....	1.25c per KWH
For the next 54,000 KWH per month.....	1.20c per KWH
For the next 110,000 KWH per month.....	1.15c per KWH
For all in excess of 327,000 KWH per month.....	1.14c per KWH
Minimum monthly charge.....	25c per connected HP of motors

METER DEPOSITS

For consumers with monthly bills of less than \$5.....	\$5.00
For consumers with monthly bills of more than \$5, the deposit shall not exceed the monthly bill.	

Nothing in this order shall be construed as applying to existing contracts.

[SEAL]

PUBLIC SERVICE COMMISSION OF NEVADA,

H. F. BARTINE,

Chief Commissioner,

J. F. SHAUGHNESSY,

First Associate Commissioner,

W. H. SIMMONS,

Second Associate Commissioner.

Attest: E. H. WALKER, *Secretary.*

Dated January 29, 1914.

THE VIRGINIA' AND GOLD HILL WATER CASE

Another case of sufficient importance to call for an exhaustive investigation followed by a written opinion and order is that of the Public Service Commission against the Virginia and Gold Hill Water Company.

Complaint was made to the Commission by Assemblyman W. H. Kearns of Storey County, to the effect that the schedule of charges made by the company was unreasonable, unjust, and discriminatory, and that the service was inadequate by reason of the shutting off of the water at times when it was needed. The final hearing in the case took place on May 5, 1913. The case for the company was well made up and ably presented.

After full consideration the Commission was not able to reach the conclusion that, upon the basis of the showing made, or any data within reach of the Commission that could be lawfully used, the allegation of excessive charges and inadequate service had been sustained. It was found, however, that there was an element of discrimination in the service in the fact that residence consumers having no sewer connections were charged the same rates as those who had, which charge was \$4 per month. The Commission concluded that for those consumers who had no sewer connections \$3 per month would be a just and reasonable rate, and so ordered.

This order was promptly obeyed by the water company, and the rates have since been in full force and effect.

Following are the opinion and order based thereon. They are given in full because of the nature of the questions involved and the importance of the case in its bearing upon the hygienic quality of the water:

[Case No. U 36]

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION OF NEVADA, *Complainant,*

v.

VIRGINIA AND GOLD HILL WATER COMPANY, *Respondent.*

OPINION

This proceeding was brought by the Commission upon its own motion, such action having been induced by an informal complaint filed with this Commission by Assemblyman William H. Kearns of Storey County.

The citation issued by the Commission reads as follows:

To the Virginia and Gold Hill Water Company, Greeting:

You are hereby notified that, through Assemblyman W. H. Kearns,

the residents of Storey County have informally complained to this Commission of your charges for water in Virginia City and Gold Hill, and also of the service. From this complaint it appears to this Commission that your whole schedule of charges may be unreasonable, unjust, and discriminatory, and that the service may be inadequate by reason of the shutting off of the water at times when it is needed. The Commission, therefore, has decided to take the matter up for full investigation.

You are formally notified that on Monday, February 24, 1913, at its offices in Carson City, Nevada, the Commission will, at the hour of 11 o'clock a. m. of said day, begin an investigation of your rates, tolls, charges, rules, regulations, practices and service, at which time and place you are formally cited to appear and take such part in said investigation as your interests may require, and to produce witnesses and introduce such testimony, oral or written, as you may deem necessary and proper.

This investigation will be held pursuant to the provisions of subdivision b, section 19, of the Public Service Commission law of this State.

By order of the Commission.

(Signed) E. H. WALKER, *Secretary*.

Dated February 6, 1913.

On February 24, 1913, the respondent company appeared, represented by its superintendent, Mr. James M. Leonard, and Hon. A. E. Cheney, as counsel. The members of the Commission were all present in their own proper persons, and the people of Virginia City were represented by George L. Sanford, Esq., as counsel.

Neither party being prepared at that time to proceed, the matter was adjourned until May 5, 1913.

On the last-mentioned date the case came up for final hearing. The respondent company appeared as before by its superintendent, Mr. James M. Leonard, and Hon. A. E. Cheney, as counsel. During the interim Mr. George L. Sanford, who had first appeared on behalf of the people of Virginia City, withdrew from the case, and the proceeding was conducted by the Commission, the entire membership being present and taking part in the proceedings.

The respondent company introduced as its chief witness Mr. A. L. Adams, by profession a civil engineer, whose testimony went to the value of the respondent company's property used in serving the people of Virginia City and Gold Hill with water. The estimate of this witness was that to reproduce the plant in its present depreciated condition would cost the sum of \$667,000, including what was designated the "ice" business of the company, which, by the way, is apart from and independent of the business of furnishing water. In this estimate no allowance whatever was made for the water right.

While the Commission is not willing to commit itself to the proposition that it would cost the sum of \$667,000 to reproduce the respondent company's plant in its present condition, for the purposes of this case it is compelled to do so because there is literally no testimony in opposition to the estimate of Mr. Adams. Even assuming that the estimate as made by witness Adams might be somewhat reduced, the fact remains that no allowance whatever is made for the value of the water right, and we are not at this time in a position to challenge the estimate as made by respondent company's chief witness; although, as said before, we are not willing to be bound by it, and in any subsequent proceeding which may be had the Commission will feel itself at liberty to depart from that estimate, and to act in conformity with any other or different estimate of value which may be made.

Assuming for the purposes of this case that the estimate of Mr. Adams of the value of the water company's property is approximately correct, the Commission does not feel justified in finding that the rates as charged to the people of Virginia City, taken as a whole, are excessive or unreasonable. Viewing the matter from the standpoint of the value of the company's plant, the gross revenue, the expenses and the net, the rates as a whole cannot be fairly termed unreasonable.

It does appear, though, that there is a feature of discrimination in the charges which should be eliminated in the interest of the less favored and less advantageously situated residence consumers.

The regular rate charged this class of patrons is \$4 per month, regardless of whether they have sewer connections or not. Obviously those residents who have sewer connection will use very much more water than those who have not, and it is quite clear that the service rendered to this class of consumers is more

valuable than to those not favored with sewer connections. While the Commission is not prepared to say under the evidence submitted and the data at command that \$4 is an unreasonable rate to be charged a residence consumer who has a sewer connection, it does seem that it is excessive in the case of one who has no such connection.

It is the opinion of the Commission that the rate to the residence consumers who have no sewer connections should be reduced to \$3 per month.

In the course of the proceeding some question was raised as to the character of the water furnished by the respondent company with respect to its purity and freedom from disease germs. Desirous of being fully advised upon this point, the Commission caused samples of the water to be sent to Professor Sanford C. Dinsmore, chemist in charge of food control at the Nevada University, for analysis. After making such analysis Professor Dinsmore replied to the Commission as follows:

NEVADA AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF
FOOD AND DRUGS CONTROL

RENO, NEVADA, March 22, 1913.

MR. W. K. FREUDENBERGER, *Carson City, Nevada.*

DEAR SIR: I am sending you herewith the result of analysis of a sample of water I obtained in Virginia City, Monday, March 10. The sample was taken from a service tap in town, and is representative of the water being supplied to the city by the Virginia City and Gold Hill Water Company, at the time the sample was taken. I have made arrangements to have further samples sent to me about the first of next month, and will forward you results as soon as the work is completed.

At the time the sample in question was taken there was very little run-off, while a month later in all probability there will be considerable, which might possibly become a source of contamination of the supply. If in fact the water is liable to such contamination, or varies in character from time to time, a comparison of results of the two analyses would show it.

The analysis shows this water to be very slightly mineralized, containing but 2.72 grains per U. S. gallon total mineral matter. The sanitary analysis shows it to be entirely free from sewage or animal contamination, at this time at least.

Judging the water from the analysis of this sample alone, both from a mineral and sanitary standpoint, it is about all that could be desired for a municipal supply.

Very truly yours,

(Signed) S. C. DINSMORE.

ANALYSIS OF MUNICIPAL WATER SUPPLY—VIRGINIA CITY, NEVADA

	<i>Parts per Million</i>
Total solids.....	47.00
Silica.....	12.00
Iron.....	1.50
Calcium.....	5.20
Magnesium.....	.86
Sodium and potassium.....	6.70
Bicarbonates.....	31.00
Sulphates.....	Trace
Chlorine.....	6.00
Nitrous oxide.....	Trace

Hypothetical Form of Combination

Sodium and potassium chloride.....	9.80
Sodium sulphate.....	Trace
Sodium nitrate.....	Trace
Sodium bicarbonate.....	10.55
Calcium bicarbonate.....	21.06
Magnesium bicarbonate.....	5.17
Grains per U. S. gallon.....	2.72

Sanitary Analysis

Free ammonia.....	.006
Albuminoid ammonia.....	.060
Nitrogen as nitrites.....	None
Nitrogen as nitrates.....	None
Required oxygen.....	2.00
Chlorine.....	6.00
Suspended matter.....	Very slight
Color.....	None
Odor.....	None
Turbidity.....	None

A little later another sample of water from the respondent company's water pipes was sent to Professor Dinsmore for analysis, and the following is his statement of the result:

NEVADA AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF
FOOD AND DRUGS CONTROL

RENO, NEVADA, April 18, 1913.

MR. E. H. WALKER, *Secretary Public Service Commission, Carson City, Nevada,*

DEAR SIR: Following is the result of analysis of a sample of water from the Virginia City public service supply received April 10, 1913:

	<i>Parts per Million</i>
Free ammonia.....	.014
Albuminoid ammonia.....	.072
Nitrogen as nitrites.....	Trace
Nitrogen as nitrates.....	Trace
Required oxygen.....	2.10
Chlorine.....	6.00
Total solids.....	47.00

The analysis shows a slight increase in organic matter over the sample collected by myself about six weeks ago, but the increase is so slight as to be practically negligible.

Very truly yours,

(Signed) S. C. DINSMORE.

From the foregoing it appears to the Commission that at this time the quality of the water furnished to the people of Virginia City and Gold Hill is all that can be reasonably expected, and we can see no reason for any further action with respect to this phase of the case.

It is the opinion of the Commission, therefore, that the interests of all parties will be fairly subserved and justice be done by the making of an order prescribing a \$3 per month rate for all residence consumers not having sewer connections.

ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA.

This being a regular meeting of the Public Service Commission of Nevada, all members thereof being present, it is hereby ordered that the charge for water in Virginia City and Gold Hill of Storey County, Nevada, made by the respondent company to residence consumers not having sewer connections, be reduced from four (\$4) dollars per month to three (\$3) dollars per month, and the said respondent company is authorized and directed to make the prescribed rate effective from and after the 1st day of September, 1913.

[SEAL]

Dated September 6, 1913.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary.*

At this point it may not be ill timed once more to direct attention to the fact that, while the Public Service Commission is in name a separate commission, the law creating it amounted to nothing more than an extension of the powers of the Railroad Commission. The last-named commission is made ex officio a public service commission and is given jurisdiction of a few utilities not named in the Railroad Commission law. Necessarily, this extension of the powers and duties of the Railroad Commission entails some additional expense, but it has been very small compared with the magnitude of the work which it has in hand and equally small when viewed in the light of the results attained. Apart from the salary of the engineer, which is modest and conservative, considering the high character of the service required of him, the Public Service Commission has thus far added less than \$2,500 per annum to the expense of the Railroad Commission. The importance of the Commission's having the service of a careful and competent engineer, one who is not only familiar with the scientific principles which are applied in the regulation of public utilities, but who possesses a knowledge of mathematics which

enables him to solve any problem expressed in figures which may arise in the course of the Commission's work, can scarcely be overestimated. Every public utility with which the Commission has to deal is represented by high-class experts familiar each with his own particular line of work. It is not to be supposed that a Railroad Commissioner can be a lawyer, an engineer, a mathematician, and a rate expert, all in his own proper person. There are limits to every man's capacity. The Commission has to deal with matters coming under all of the heads named, and it necessarily has need of something in the way of expert help. We have a secretary who is a fine rate man so far as railroads are concerned, and we have an engineer who is equally capable in his own line. The engineer of the Public Service Commission has also been appointed engineer of the Railroad Commission without additional salary and his services as required are rendered to both Commissions indifferently. It is a pleasure to be able to say that his services have been in the highest degree satisfactory and has amply justified his selection for the position which he holds.

THE WONDER WATER CASE

This case was unique and quite informal in character, which was due to the fact that the circumstances and the situation at Wonder were peculiar. It required no extended comment, but is referred to at this point because of the fact that it was deemed of sufficient importance to be made the subject of special investigation, opinion and order. Logically it should be mentioned and embodied in this portion of the report, and therefore the opinion and order are set out in full. They are as follows:

[Case No. U 51]

BEFORE THE PUBLIC SERVICE COMMISSION

C. A. LAMB (Wonder, Nevada), *Complainant*,

v.

THE WONDER WATER COMPANY, *Respondent*.

OPINION

SHAUGHNESSY, *Commissioner*:

This complaint was made by C. A. Lamb of Wonder, Nevada, August 8, 1913, and reads as follows:

WONDER, NEVADA, August 8, 1913.

PUBLIC SERVICE COMMISSION, *Carson City, Nevada*.

GENTLEMEN: I wish to present the matter for the fair investigation of your honorable board, in regard to the rates charged and rules of the Wonder Water Company.

A corporation furnishing water to the town of Wonder since 1907 or 1908, from Bench Creek, a distance not to exceed six miles, a natural stream, and gravity flow.

Present rate is two cents (2c) per gallon through meters, and four (4c) cents per gallon by the five-gallon can, or three and one-half (3½c) cents by the barrel, delivered by wagon for main supply up to one-fourth mile, and not to exceed one-half mile, but adjacent to the company's main line.

I wish your honorable Commission to enforce chapter 255, section 3, fixing a permanent rate to be charged for fire protection; also, if within your power, to compel the above company to cease from taking out meters from houses, if not continuously occupied, having no other fire protection and owners agreeing to pay 2 cents per gallon for all water drawn through meters in case of fire.

There being only two individual fire plugs of different size and a very limited amount of hose, having to depend solely on the water through the meters for fire protection in majority of homes, which we would like to have at all times.

There is at present, and always has been, a continuous complaint on

the part of the company and employees, since the meters were installed, accusing people of stealing water.

Conditions are not right, hence this uncalled-for controversy. Enclosed bill will show in part the cost of meters and repairs which are taken out by the company at its own pleasure, people paying a higher rate for water delivered by wagon, and leaving no protection in case of fire. I trust your Commission will investigate:

First—The number of salaried employees.

Second—Wages paid for services rendered.

Third—The amount of business, and if an unnecessary expense for same.

Fourth—The excessive price of \$1.50 per barrel charged for delivering water in town, more than water delivered from the same place but used outside of town, which is 25 cents per barrel.

Fifth—If the excessive cost of delivering water by wagon such a short distance could be eliminated or curtailed by installing hydrants at suitable points, allowing the people to deliver their own supply.

Sixth—If a flat rate to all buildings occupied, according to size and for purpose used, eliminating all this cost and controversy over meters, reducing the cost of water to consumers, and no doubt equally profitable to the company as present arrangements.

Seventh—That hydrants be arranged for hose connections and used for fire purposes only.

Trusting that your able service may reduce the cost of water, obtaining better facilities for fire purposes, and a more friendly feeling between water company and consumers, and thanking you in advance for anything you may do to better conditions, I remain, at your service.

Yours truly,

C. A. LAMB.

The following bills accompanied the complaint:

Chas. A. Lamb, Wonder, Nevada.		WONDER, NEVADA, June 12, 1912.
To Wonder Water Company, Dr.		
June 12—To tapping main, corporation cock and meter cock at old drug store.....	\$10.00	
To one hydrant faucet.....	1.75	
To $\frac{1}{2}$ day's labor, Burt.....	2.50	
Received payment: John Burt.		\$14.25
Chas. A. Lamb, Wonder, Nevada.		WONDER, NEVADA, June 12, 1912.
To Wonder Water Company, Dr.		
June 12—To 21 ft. $\frac{1}{2}$ -in. W. I. pipe at 12 cts.....	\$2.50	
To 3 $\frac{1}{2}$ -in. ells, 25cts.; 2 reducers 1- $\frac{1}{2}$ in., 25 cts.....	.50	
To hydrant faucet.....	1.75	
To tapping main, corporation cock, meter cock at clubhouse.....	10.00	
To $\frac{1}{2}$ day's labor, Burt.....	2.50	
Received payment: John Burt.		\$17.25
Chas. A. Lamb, Wonder, Nevada.		WONDER, NEVADA, Dec. 2, 1911.
To Wonder Water Company, Dr.		
Nov. 1911—To one water meter and tap.....	\$10.00	
To 10 ft. $\frac{1}{2}$ -in. gal. iron pipe at 15 cts.....	1.50	
Received payment: John Burt.		\$11.50

On August 16, 1913, at a regular meeting of the Commission, the complaint was considered, and the Chief Engineer of the Commission was ordered to go to Wonder and make a thorough investigation of the existing conditions with reference to water service and charges by the Wonder Water Company.

Accordingly Engineer Freudenberger went to Wonder on August 26, 1913, and made his investigations. On his return to Carson he reported that, in his opinion, the trouble was principally due to the fact that the rates charged for water by the Wonder Water Company were so excessive that the consumers could not afford to buy enough water for their ordinary needs.

The company's rates on file with this Commission are as follows:

Minimum meter rate per month.....	\$2.50
Average meter rate per gallon.....	.02
Maximum meter rate per month.....	7.00
Fire service plugs.....	Free
Freight teams, Fallon to Wonder.....	Free
We haul by barrel in Wonder, 50 gal.....	1.00
We haul by 50-gal. barrel at distances.....	\$1.25 to 1.75
Customer haul his own, 50 gal.....	.25

On September 3, 1913, a letter was addressed to Mr. Wm. Matson of San Francisco, president of the water company, asking for further information not obtain-

able in Wonder. Mr. Matson replied by having his secretary, H. B. Gregg of San Francisco, and E. S. Cunningham, superintendent of the water company at Wonder, come to Carson for an informal conference with the Commission. These officials met with the Commission on September 10, 1913, and furnished detailed information as to the cost of the water company's property, cost of operation and the earnings from sales of water, and other data.

At this conference the Commission submitted a new schedule of rates for the officials of the water company to consider. After some discussion of the proposed schedule, the officials agreed to try them out if they were acceptable to the complainant. The proposed schedule is given below:

FLAT RATES PER MONTH

Monarch House.....	\$25.00—5,000 gal. allowed
J. M. Kier.....	15.00—3,000 gal. allowed
J. W. Phelps.....	25.00—5,000 gal. allowed
J. Burns.....	5.00—1,000 gal. allowed
A. Jacques.....	5.00—1,000 gal. allowed
A. A. Smith.....	10.00—2,000 gal. allowed
J. C. Garriott.....	9.00—1,800 gal. allowed
F. M. Tannehill.....	5.00—1,000 gal. allowed
J. Holmes & Co.....	3.50— 700 gal. allowed
L. C. Benadum.....	15.00—3,000 gal. allowed
Residences, including barrel service.....	2.50— 500 gal. allowed
Cabin service, 5-gal. can users.....	1.00 for service 4 times a week in summer and 2 times a week in winter.

METER RATE

For the first 5,000 gallons per month.....	\$5.00 per 1,000 gal.
For the next 10,000 gallons per month.....	3.50 per 1,000 gal.
All in excess of 15,000 gallons per month.....	2.00 per 1,000 gal.

These meter rates to apply to the entire consumption when customers use more than the above allowances.

This proposed schedule was also submitted to the complainant, Mr. C. A. Lamb, for his consideration, and after some correspondence, on October 6, 1913, he agreed to accept it.

With reference to additional fire hydrants, complainant was advised that the franchise gives the County Commissioners power to require the water company to install fire hydrants wherever, in the opinion of that body, more hydrants are needed.

Referring to the charge for installing meters, it is proper to say that this Commission does not approve a charge for installing meters, but does allow a company to require a reasonable deposit. Such deposit is demanded in order to guarantee the payment of bills, but is returned to the customer when his service is discontinued.

In conformity with the foregoing opinion the following order will be entered:

ORDER

At a regular session of the Public Service Commission of Nevada on this 10th day of January, 1914, all members of the Commission being present, it is hereby

Ordered, That on or before the 1st day of February, 1914, the Wonder Water Company publish and put into effect the following schedule of rates, to wit:

FLAT RATES PER MONTH

Monarch House.....	\$25.00—5,000 gal. allowed
J. M. Kier.....	15.00—3,000 gal. allowed
J. W. Phelps.....	25.00—5,000 gal. allowed
J. Burns.....	5.00—1,000 gal. allowed
A. Jacques.....	5.00—1,000 gal. allowed
A. A. Smith.....	10.00—2,000 gal. allowed
J. C. Garriott.....	9.00—1,800 gal. allowed
F. M. Tannehill.....	5.00—1,000 gal. allowed
J. Holmes & Co.....	3.50— 700 gal. allowed
L. C. Benadum.....	15.00—3,000 gal. allowed
Residences, including barrel service.....	2.50— 500 gal. allowed
Cabin service, 5-gal. can users.....	1.00 for service 4 times a week in summer and 2 times a week in winter.

	METER RATE
For the first 5,000 gallons per month.....	\$5.00 per 1,000 gal.
For the next 10,000 gallons per month.....	3.50 per 1,000 gal.
All in excess of 15,000 gallons per month.....	2.00 per 1,000 gal.
These meter rates to apply to the entire consumption when customers use more than the above allowances.	

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

[SEAL]

Dated January 10, 1914.

CASES BEFORE PUBLIC SERVICE COMMISSION DURING YEAR 1913

Following is a brief statement of the various cases in detail:

Case No. 1—Minimum Monthly Charge, Electric Bill.

The complaint in this proceeding was filed by O. H. Mack of Reno against the Reno Power, Light and Water Company on May 1, 1911, alleging excessive minimum charge for electric-light service in his office.

This case has been given consideration by the Commission since the complaint was filed, but the same has not been finally determined at the time of closing this report.

At the regular meeting of the Commission held February 14, 1914, this case was consolidated with Case No. 32, entitled *Public Service Commission of Nevada v. Reno Power, Light and Water Company*.

Case No. 2—Shortage of Water Supply in Austin, Nevada.

An order was made in this case on March 27, 1912, a copy of which will be found in the Commission's annual report for 1912.

Under date of April 18, 1913, the Commission received a further complaint from the citizens of Austin alleging that the order of the Commission had not been complied with in that the tank which the Commission had ordered constructed had not been completed and put in condition for use. The matter was brought to the attention of the water company, and notice was received from them later that the tank had been placed in service May 7, 1913.

Case No. 5—Reno Electric Rates.

June 25, 1911, complaint was filed by O. H. Mack of Reno alleging excessive electric rates of the Reno Power, Light and Water Company. This case has been under consideration by the Commission and has been consolidated with Case No. 32, referred to later in this report.

Case No. 15—Excessive Electric Rates at Ely.

This case was opened on January 29, 1912, by the filing of a complaint by the citizens of Ely against the Ely Light and Power Company, alleging excessive electric rates, and appears in the annual report of the Commission for 1912.

This case is fully set forth by the following opinion and order, supplemental opinion and amended order, and dissenting opinion and explanatory statement.

[Case No. U 15]

BEFORE THE PUBLIC SERVICE COMMISSION

CITY OF ELY, *Complainant*,

v.

ELY LIGHT AND POWER COMPANY, *Respondent*.

Appearances:

For Complainant, Mr. Gilbert F. Boreman, City Attorney.

For Respondent, Mr. Samuel W. Belford.

OPINION AND ORDER

BARTINE, Chief Commissioner:

PRELIMINARY STATEMENT

This case was brought by the city of Ely through its City Council, which Council in turn was represented by the City Attorney, Mr. Gilbert F. Boreman.

Before proceeding to a consideration of the merits of the case it seems proper to offer a word explaining the delay which has occurred in the decision of this case. At the close of the hearing time allowances were made to the attorneys representing the respective parties. The first brief was to be filed by Mr. Boreman, representing the complainant. The respondent was given time in which to answer the opening brief, and then the complainant was allowed further time in which to reply. All of this was subject to the understanding that the various time allowances might be extended by stipulation between the parties. Such stipulations were repeatedly made. The result has been that counsel for the city of Ely filed no brief whatever, and, as it appeared to the Commission that the case should be settled, counsel for respondent was notified to file his brief, whereupon the case was to be closed. This brief was duly filed on the 6th day of March, 1913. It was voluminous, comprehensive and strong. It is simple justice to say that respondent's counsel covered the case from his viewpoint with consummate ability, and, while the Commission cannot accept as sound all the contentions made by Mr. Belford, it is not because the ability manifested in the preparation of that brief is not fully appreciated. Very naturally, counsel for respondent makes every point which he deemed it proper to make on behalf of his client. He makes it in a lawyer-like manner, and if his views are not accepted with respect to some of the more salient features of the case, it is merely because in the judgment of the Commission the law of public service regulation is against him with respect to such features. With this preliminary statement we now proceed to a consideration of the case upon its merits.

THE ISSUES PRESENTED

The substance of the complaint is that the rates charged by the respondent company are unreasonable, unjust, and discriminatory. The complaint was a formal one, in which the alleged grievances of the complainant were clearly and specifically set forth. The answer was equally formal, all the averments of the complaint being specifically and unqualifiedly denied.

The hearing began at Ely, Nevada, on April 16, 1912, before Chief Commissioner Bartine, with the Commission's engineer, Mr. W. K. Freudenberger, present in an advisory capacity.

The hearing covered a period of four days, April 16 to April 19, inclusive. The testimony was voluminous. Much of it touched the issues only remotely, and it will not be necessary to do more in this opinion than to refer to the salient and more important features of the case.

THE RATES CHARGED

It appears from the testimony that the respondent company maintains two general rates or charges, namely, "A" and "B." The "A" rate is 8 cents per kilowatt-hour and 75 cents additional for each lamp installed. The "B" rate is 20 cents per kilowatt-hour of current consumed, without regard to installation. The practical effect of these two rates is that the party with a large installation may be charged more than one with a smaller installation but larger consumption of current. Two of the illustrations given in the pleadings were considered more or less at length at the hearing. These are the cases of Hall & Company and the Northern Hotel. The former used 413 kilowatt-hours and its bill was \$58.55. The latter used 415 kilowatt-hours and its bill was only \$44.45. The difference was due to the fact that Hall & Company had 34 lamps installed, while the Northern Hotel had only 15. From the foregoing statement it will be seen that the party consuming the larger quantity of current actually paid \$14.10 less than did the one consuming the smaller quantity of current. Upon its face this appears to be a clear case of discrimination, but it is not so in a sense which makes the company in any way culpable. The apparent discrimination, or inequality, which may possibly be the better expression, is the result of the system adopted.

"READINESS TO SERVE"

The charge made for installation is defended by the respondent upon the ground that the installation obligates the company to serve current to the full extent of the installation. Theoretically, this may be sound, but practically it is

not. This company charges as if it might be called upon to serve the entire installation at once, but it never has, in fact, been required to do so, nor could it. The nominal capacity of the plant is 200 kilowatts. Allowing 25 per cent for overload capacity it can only furnish 250 kilowatts, while the installation calls for 513 kilowatts. In dealing with a case of this kind the Commission cannot feel that it is bound to mere theories. We must consider the situation as it actually is in the light of the established facts. From this viewpoint it is impossible to avoid the conclusion that the method of charging produces very great inequalities, which cannot be justified upon any purely theoretical claim that the company is entitled to charge for "readiness to serve." Charges based upon such a claim are very likely to lead to grave abuses, and in this case it is quite patent that they have done so.

Obviously it costs the defendant more to actually furnish current than it does to merely stand "ready to serve," and especially is this true when the company is not able to perform its obligations to serve to anything like the extent of the installation. In this case it appears that the company could not, by any possibility, "serve" up to one-half of the amount of the installation, and this simple circumstance shows very plainly the injustice which such a method of charging involves. Putting it concisely, the respondent is charging for a "readiness" to render a service that it could not, by any possibility, render with the present capacity of the plant.

CUSTOMER GIVEN THE LOWER RATE

In further defense and explanation of this charge, it was shown at the hearing that it was a rule with the company to charge either the "A" rate or the "B" rate as the same might be lower to the consumer. Here, again, we are confronted by a theory of charging which seems to be sound and reasonable, while, as we view it, the result is far from being satisfactory. The illustration already given shows that the method does not work out equitably in practice. One party is charged \$14.10 more for 413 kilowatt-hours than the other is for 415 kilowatt-hours. The respondent receives this \$14.10 as a return for what has been termed a "readiness to serve" through the medium of 19 lamps in excess of those installed by the other party. Still, the obvious fact is that this additional service was not rendered, and yet the party having the larger installation (paid for by itself) is required to pay the additional \$14.10 merely because the lamps are located upon his premises. A method of charging which produces such results certainly works an injustice, and should be changed.

THE "A" RATE SHOULD BE ELIMINATED

It is believed that the "A" rate should be entirely eliminated and the whole system of charging based upon the current actually consumed. In this way every one pays for exactly what he gets—no more, no less. He has no cause for complaint if the charge be reasonable, while the company receives full compensation for the service rendered, provided that the charge be fair and compensatory.

RESPONDENT'S CONTENTIONS

Having reached the conclusion that the "A" rate should be entirely eliminated and that all charges should be based upon the current consumed, we come now to a consideration of what would be reasonable rates upon the last-mentioned basis. In order to do this, it is proper that we should take up and consider the principal contentions of the respondent company, as set forth in the brief filed by its counsel with this Commission, and also to pass in review the evidence bearing upon the value of the plant, the expense of operation, and the net income. The principal point for further consideration is the actual value of the plant.

THE VALUE OF THE PLANT

At the hearing it was agreed that the Commission's engineer should make a valuation of the plant, and it was stated by the respondent company that the engineer's estimate of value would be satisfactory. The witnesses for the respondent company place the value of the old plant, which is in regular operation, at \$80,879. This is, of course, exclusive of the reproduction value of the new plant (so called) located in East Ely. Engineer Freudenberger has made his statement, fixing the value of the plant at \$57,117, against the company's valuation of \$80,879. Under all the circumstances of this case, and in view of the fact that we regard our engineer as being thoroughly capable of making the valuation, and in view of the further fact that he is wholly disinterested, we feel constrained to accept his valuation against the estimate of the company's officials. The respondent has been fully apprized of this valuation.

THE NEW PLANT

It is argued very strongly by respondent's counsel that the value of the new plant should be considered in determining the actual value of the property used in rendering the service. It is claimed that this should be done for the reason that the new plant has on one or two occasions been used to render the service while the old plant was being repaired. The claim is based upon the fact that in some cases courts or commissions have held that all property should be taken into account that is "used" or "useful." This claim, in our judgment, is very much too broad. As we view it, the proper rule is that everything "used" and "reasonably necessary to be used" should be considered. The manager of the respondent company frankly admitted in his testimony that the construction of the new plant was a mistake on the part of the company; that it was built upon the theory that Ely would speedily develop into another Butte, and that such plant would be necessary to furnish adequate service. But, while Ely is a good town for its size, it has not developed into a Butte, nor does there appear to be any immediate prospect of its doing so, although, as to that, no one can speak with certainty. It is impossible for any one to forecast intelligently the development of a mining district. Mineral deposits being underground, their extent and value cannot be determined with any degree of assurance. It may easily be shown in some cases that there are deposits of a general average value covering a certain known area. These estimates, however, are quite general and can only be considered as approximately correct. It is much easier for experts to determine the fact with a measure of certainty that mineral deposits have a certain extent than it is for them to conclude satisfactorily that the deposits do not extend very much further, both superficially and in depth.

Clearly it would be unjust to require the people of a small city like Ely to pay in their electric-light charges for the mistake of the company in building an unnecessarily large and expensive plant.

The company's manager also admitted that the new plant, by reason of its great size, could not be used to serve Ely with electric light and power except at a loss. Therefore, we are unable to see why the Commission should give any consideration whatever to either the cost or reproduction value of the new plant. While it has been used to serve the people of Ely with light and power, the period of such service has been very brief, and it has only been done in cases of emergency when the old plant was temporarily out of order. Hence, we must reject the view urged by respondent's counsel that the new plant having been "used" and being "useful," its value should be considered as a part of the company's investment, for the purposes of this case.

ALLOWANCE FOR A RELAY PLANT

Respondent's counsel apparently appreciates the weakness of the contention that the new plant, which appears to have cost something more than \$160,000, should be considered, because in a later portion of his brief he takes the position that the company should be allowed at least \$15,000 for such additions to, and duplications of, parts of the old plant, as would enable it to meet emergencies. We cannot agree with this for two reasons: The first is that the investment of \$15,000 has not been made, and we cannot anticipate that it will be. The company is under no obligations to make this additional investment, and it certainly is not entitled to earn money upon the sum mentioned when the same has not been put into the enterprise. When the plant is improved by additions and duplications to such extent, if it appears that such additions and duplications are reasonably necessary, then, and not until then, can the \$15,000 be considered a part of the investment upon which the company is entitled to receive a net return.

In this connection it may be proper to observe that our engineer estimates that all necessary additions and duplications to the old plant might be made for about \$7,000, which would raise the total valuation of the plant to approximately \$65,000.

ALLOWANCE FOR EXCESS POWER

It is claimed that the respondent company should be allowed for excess of power which is necessary to meet sudden and extreme demands. Our answer is that such allowance is already being made. The actual power of the plant is about 250 kilowatts after allowing 25 per cent for overload capacity, while the maximum demand thus far has been only about 109 kilowatts. It seems to the Commission that this is all the excess of power or capacity that the people should be called upon to pay for in order to receive fair and adequate service.

THE WATER POWER

This plant is run partly by steam and partly by water power. The latter is hired at a rental of \$300 per month, or \$3,600 a year. Respondent claims that the company should be allowed something in addition for the contractual right by which the water has been acquired. We must reject this view. The \$300 per month rental is carried into the expense account, the company given full benefit of it, and any valuation of the contract over and above the benefits that flow from the use of the water would be unjust to the consumer. When the respondent company pays \$300 per month rental for the water, in the absence of any counter showing, the presumption is that the rental is fair and reasonable; that the owner of the water is receiving a fair return, and that the water is worth the amount paid by the company. It appears from the testimony that the production of electricity by the company, through the agency of the water power thus acquired, is considerably less expensive than when steam power is used. Such being the case, it is obvious that the company is receiving everything that it is entitled to on account of the water power used. If steam power were used exclusively, the expense to the company would be very much greater, while the service to the consumer would be no better than it is now. As the matter stands, it is apparent that the use of the water in lieu of steam is a distinct and important advantage to the company, and we are wholly at a loss to see any reason why the company should be allowed something additional upon the score of the value of the contract by which the water is acquired and used. Moreover, no estimate is made of the value of such contractual right, and to undertake to place a valuation upon it would be a blind guess.

In thus passing upon the issue raised concerning the water power employed, we do not undertake to determine its actual value. We simply deal with the matter as it stands upon the basis of the testimony adduced at the hearing.

GOOD-WILL, ETC.

The respondent company very strongly urges that the "good-will" and "value of the business" as a "going concern" should also be taken into account. No data is furnished upon this point, and here again, if we were to consider those elements as additions to the aggregate value of the property employed, it could only be upon the basis of loose conjecture. But there is another reason for rejecting this claim. It is this: The respondent company has practically a monopoly of the business now under consideration. The people must patronize the utility, even though there may be a total absence of "good-will," and in such case the expression "going concern" merely spells monopoly. Private parties in transferring a business may consider such elements and give them an estimated value, but it is too uncertain and indefinite to receive weight in this case, or, in fact, generally, in the regulation of utilities where the utility is in the enjoyment of a monopoly.

It must be borne in mind that absolutely all the value which the respondent's plant has results from the patronage of the people served. Should Ely and East Ely both go out of existence, the respondent's property would be almost valueless. It does not own the water right, and the structural property—meaning buildings, poles, wire, machinery, etc.—would only be worth their salvage value. The right of way would lose all value. We are, therefore, unable to see any reason why the people of Ely should be required to pay rates which would yield a fair return upon the respondent's actual investment, with additions for various intangible considerations, the value of which it is utterly impossible to estimate with any degree of accuracy, and which, indeed, would have literally no value were it not for the patronage of the people of Ely. To require the city of Ely to pay rates which would afford a fair return upon the value of contractual rights, the "good-will," and the value of the business as a "going concern" is to require that city to pay a return upon values that would be altogether nonexistent were it not for its (the city's) patronage.

THE LIFE OF MINING CAMPS

In this case the usual claim is made that mining camps are short lived, and therefore the respondent should be permitted to earn large returns for the comparatively limited period of the camp's life. Here, again, we are confronted by an element of extreme uncertainty. It is probably true that some consideration should generally be given to this claim. This is usually done through the allowance of a depreciation account, the rate being higher as the risk upon this head appears greater. In this case an allowance of 5 per cent seems ample. There

is no evidence in this case that would justify an estimate of less than 20 years' life for Ely at approximately its present size. With each succeeding year since 1907 the ore deposits in sight have been constantly increasing. There is no evidence that the limits have been reached. It does appear that the Ely district is one rich in minerals, and there is nothing in the testimony to indicate that either the boundaries or the value of the various deposits have been discovered. It is estimated that the Nevada Consolidated Copper Company now has something like 40,000,000 tons of ore in sight. This does not mean that there are no more than that number of tons. Moreover, it is known that there are some good ledge mines in the district in an advanced stage of development, and with respect to such properties it is very difficult to estimate the extent of the deposits. All that we know is that, so far as explorations give any indication, the deposits are large, and that the limits have not been found. Taking the testimony as it stands and giving it the fairest consideration, there seems to be no limit to the life of the camp that we may need specially to take into account in this case. The respondent company has been doing a good business for a number of years with every probability of its continuance for many years to come. Under these circumstances it is felt that the adjustment of rates at this time should be made upon the basis of existing conditions. Should those conditions change materially in the future, the Commission can take cognizance of them and make further readjustments.

UNCERTAINTY OF MINING CAMPS AFFECTS ALL

It is proper to observe at this point that, in the judgment of the Commission, too much weight has been given to the claim that mining camps are short lived, for the purpose of justifying what might appear to be excessive rates. When a public service corporation engages in business in such a locality, it takes no greater risks generally than most business men in the same place. It is sometimes said that there is a difference between a public service corporation and parties engaged in other lines of business, in this: that the public service corporation is subject to regulation, while other callings are not. It is hard to say just how much weight should be attached to this distinction. While it is true that a merchant in a mining camp is not subject to regulation, it is equally true that as a rule he is subject to competition. On the other hand, while the public service corporation is subject to regulation, in small communities it is free from competition. In other words, as elsewhere herein stated, public service corporations are generally monopolies, having complete control of the business in their particular lines.

Going a step further, attention might be called to the fact that, while the public service corporation takes chances in establishing itself in a mining camp, every other business concern does the same thing. In this particular case, for example, if the city of Ely should ever greatly diminish in size and general prosperity, while it would affect the business of the public service corporation, the business of the people would be affected in much the same way and probably in about the same ratio. It is figured that when the mining camp ceases to be of any consequence, the public service plant ceases to be of any more than salvage value. The same is true of nearly all the other property in such mining camp. Some of the real property hardly has a salvage value. The principle does not seem to be entirely sound that a public service corporation engaging in business in a mining camp should be absolutely secured against loss, by being allowed to charge extraordinarily high rates, while every one else engaged in business therein must accept such prices as he can get for what he has to sell. Putting it briefly, the public service corporation and the community which it serves must stand or fall together. So that, while it may be proper to allow something additional to a public service corporation, in the way of charges because of the uncertainty of the life of a mining camp, we should also be exceedingly careful, for the reasons above stated, not to attach undue weight to this consideration. In dealing with this case the Commission is endeavoring to act in a spirit of even-handed justice, both to the utility and the people.

PERCENTAGE OF RETURN

Counsel for respondent argues at length to show that the respondent company is fairly entitled to earn 12 per cent upon the value of the investment. Upon this point it is deemed proper to say that it is not the function of a public service commission to determine just how much return upon the investment a public utility is entitled to receive. Our duty is to ascertain and determine what are reasonable rates, all the facts, circumstances and conditions considered. It may very well be, and frequently is, the case that one public service corporation real-

izes a large net revenue upon the basis of low rates because of the magnitude of its business, while, upon the other hand, similar corporations realize very little net revenue, and in some cases none, because of the fact that the business is so small.

INTEREST RATES

Evidence was introduced showing that 12 per cent was the prevailing rate of interest in the Ely district. This, however, is not controlling. The 12 per cent interest rate is usually applied on loans of comparatively small amounts and short duration. Larger and long-time loans are frequently made at 8 per cent, and sometimes less. It is a matter of common knowledge that county and municipal bonds in Nevada, which are secured by the whole resources of the county or municipality, are generally floated at about 6 per cent, and even at 5 per cent. There are two reasons for these lower rates. One is that (speaking generally) such bonds are more readily convertible into money than are most other forms of securities; secondly, they usually have a considerable length of time to run, and hence are desirable as permanent investments. The first consideration named may not apply to an investment in a public service corporation, but the second clearly does. Public utilities are usually long lived. Measured by human standards of existence, they may be fairly called permanent. If a bank could, for example, loan all of its money upon good security for long periods of time, there is no doubt that the rate would be very much less than 12 per cent. As a matter of fact, even comparatively small loans well secured are frequently made by banks in this State at 8 per cent, and the lawful rate is 7 per cent. The Commission, in dealing with such a case as this, cannot regard the statement that the banks of Ely generally charge 12 per cent upon comparatively small loans, as furnishing a fair standard by which to determine the amount of revenue which the respondent company is entitled to earn. We do not wish to be understood as saying that under no circumstances would we look with favor upon a return of 12 per cent, or even more. But our first consideration is the question of reasonable rates to the patrons of the respondent company.

The Supreme Court of the United States has well said that it does not by any means follow that a reduction of rates means a corresponding reduction of the revenue of a public service corporation, because it may very easily come to pass that lower rates will lead to larger business, and that the public utility may gain instead of lose by the reduction.

ALL ELEMENTS TO BE CONSIDERED

In dealing with this case we cannot consider merely the question of how much the respondent company should be permitted to receive as a net return. We must decide the case upon the basis of all the elements that are usually taken into account in dealing with this class of cases. This we have endeavored to do in a spirit of perfect fairness. We have not confined ourselves to a consideration of any one element, but we have in mind all the circumstances and conditions under which this service is being rendered. The members of this Commission are personally familiar with industrial and business conditions throughout the State of Nevada. We recognize the fact that conditions here differ very materially from those in the older and more easterly States of the Union. Indeed, we cannot be blind to the fact that Nevada conditions differ considerably from those of any other American State. We also understand that in a State as large as ours the conditions may, and do, vary greatly in different parts of the State. For example, the conditions in Ely are not at all similar to the conditions in Reno, and if we were disposed to rely upon a mere comparison between the electric-light charges in Ely and Reno, the comparison would operate very much to the disadvantage of Ely. Under existing conditions we would not think of ordering the same schedule of rates into effect at Ely that are applied by the Reno Power, Light and Water Company.

ELY RATES HIGH BY COMPARISON

But we also have in mind the fact that with only two or three exceptions the rates charged at Ely are the highest of any in the State of Nevada; and, further, that where the rates are as high as those in Ely the conditions are such that a generally higher range of prices obtains, as, for example, in Tonopah and Goldfield. Not only this, but it is by no means certain that a full investigation might not make it apparent that in the last-named towns the rates are rather higher than they should be in fairness to the people. Upon this point, however, we

express no opinion. It is, though, perfectly obvious that the charges at Ely are considerably higher than the general average of such charges throughout this State. There is no doubt that the respondent company is entirely familiar with the schedule of rates of all other similar public service corporations in Nevada, the sworn reports of which are on file in this office, and constitute parts of the Commission's official records.

REVENUE NOT TO BE DISREGARDED

From this it is not to be understood that the element of revenue should not be considered and be given weight. A commission should not cut rates to such a scale as to confiscate the property of a public service corporation, or, generally, to deprive it of a fair return upon the investment, which, in substance, means the same. No more should it pursue a policy which is calculated to discourage the investment of capital in public utilities, which are in the highest degree essential for the progressive development and general prosperity of a State. But we cannot tie ourselves to the consideration of revenue alone. The right of the people to have the service rendered at reasonable rates is also undeniable, and this Commission is not at liberty to ignore that feature of this or any other case with which it is called upon to deal. Having due regard for all these various considerations, the Commission cannot avoid the conclusion that the present schedule of rates charged by the respondent company is too high, and that it should be materially reduced. We feel that this is due to the people who patronize the respondent and who give to its properties practically all the value they have.

SERVICE GENERALLY GOOD

In justice to the respondent company it is proper to say that the service is, generally speaking, good. No showing was made to the contrary. The matter of street lighting was brought into the case, but the showing thereon was not very definite. It appears that this matter rests in contract, either written or oral, between the city and the company. No reason is apparent why any defects in that branch of the service may not be remedied by further agreement and understanding between the city authorities and the respondent company. Or, if there be any doubt as to the reasonableness of the rates for that service, it would seem that this also may be in like manner adjusted by agreement. But, with respect, however, to the service as a whole, the evidence failed to show that it was not as good as could reasonably be expected under the existing circumstances.

ERRORS IN BILLS

As a further matter of justice to the company it is proper to say that, while a considerable number of bills showing an excess of charges were introduced in evidence, there was nothing to indicate any purpose on the part of the company to overcharge. They seem to have been errors which may readily creep into the accounts of any business concern. This view is emphasized by the circumstance that among the overcharge bills was one against the respondent company's own counsel, Mr. Belford. We may go a step further along this line, and say that the Commission finds nothing in the record to justify the belief that the respondent company, in rendering the service which it does, is acting otherwise than honorably in the light of established commercial practices. Unquestionably, as is always the case with business concerns, it is endeavoring to make money; but we are not able to see where or how, in doing so, it has in any way crossed the line of commercial integrity. In the conclusion which the Commission has reached there is no purpose to reflect upon the respondent company, its management, or its practices, in any discreditable way. Upon the basis of the record, as a whole, it appears to the Commission that, all things considered, the rates as charged are too high, and a readjustment is herein recommended, which we believe will be fair and reasonable, both to the respondent company and the people who are being served.

RECOMMENDATIONS

In view of the foregoing, the Commission is of the opinion that the "A" rate now in force should be entirely eliminated; and that in lieu of the "B" rate the following should be substituted:

Fifteen (15) cents per kilowatt-hour upon all consumption of current by a single consumer, for the first fifty (50) kilowatt hours consumed per month.

Twelve and one-half (12½) cents per kilowatt hour upon all consumption of current by a single consumer, for the next two hundred (200) kilowatt hours consumed per month.

Ten (10) cents per kilowatt-hour upon all consumption of current by a single consumer, for all in excess of two hundred and fifty (250) kilowatt-hours consumed per month.

That the minimum charge of \$2 should be reduced to \$1.50.

That the power and city lighting rates should not be affected by any order made in this case.

ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, NEVADA.

On this 7th day of June, 1913, all the Commissioners being present, it is ordered as follows:

First—That the so-called "A" rate, now applied by the respondent company in the city of Ely, be entirely eliminated and discontinued.

Second—That in lieu of the "B" rate, now applied by said respondent company in said city of Ely, the following rates be applied and made effective:

Fifteen (15) cents per kilowatt-hour upon all consumption of current by a single consumer, for the first fifty (50) kilowatt-hours consumed per month.

Twelve and one-half ($12\frac{1}{2}$) cents per kilowatt-hour, upon all consumption of current by a single consumer, for the next two hundred (200) kilowatt-hours consumed per month.

Ten (10) cents per kilowatt-hour upon all consumption of current by a single consumer, for all in excess of two hundred and fifty (250) kilowatt-hours consumed per month.

Third—That the minimum charge of \$2 be reduced to \$1.50.

That the power and city lighting rates are not to be affected by the order in this case.

The rates above prescribed shall be made effective on or before the 10th day of July, 1913.

[SEAL]

Dated June 7, 1913.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

SUPPLEMENTAL OPINION

BARTINE, *Chief Commissioner*:

After a full hearing of the above-entitled case in which both parties were represented, on the 7th day of June, 1913, the Commission filed its opinion and made an order prescribing certain rates to be charged in lieu of those then in effect.

[The order, as made, will be found above on this page.]

The respondent company failed to obey the foregoing order, but instead filed a bill in equity in the First Judicial District Court of the State of Nevada to enjoin its enforcement. The Commission in due time filed its answer to said bill, and the matter is now at issue in said court. Meanwhile the preliminary restraining order issued in said court and cause remains in effect.

Subsequent to these proceedings a further and informal hearing was had at which the respondent company was represented and furnished additional data bearing upon the question of the reasonableness of the rates prescribed by the Commission in the order set forth above. In connection with this data the Commission made further investigation and, at the same time, closely analyzed the statistical data furnished by the respondent company.

After giving all these matters full consideration the Commission is forced to the conclusion that the order as originally made in this case would, if put into effect, reduce the earnings of the respondent company to such extent as not to leave a fair compensation for the service rendered, or a reasonable return upon the value of the property used in performing the service.

It is, therefore, the opinion of the Commission that the order as heretofore made should be modified in substance as follows:

First—That the so-called "A" rate, now applied by the respondent company in the city of Ely, be entirely eliminated and discontinued.

Second—That in lieu of the "B" rate, now applied by said respondent company in said city of Ely, the following rates be applied and made effective:

Seventeen (17) cents per kilowatt hour upon all consumption of current by a single consumer, for the first fifty (50) kilowatt hours consumed per month.

Sixteen and one-half ($16\frac{1}{2}$) cents per kilowatt hour upon all consumption of current by a single consumer, for the next one hundred (100) kilowatt hours consumed per month.

Fifteen (15) cents per kilowatt hour upon all consumption of current by a

single consumer, for the next one hundred (100) kilowatt hours consumed per month.

Twelve and one-half ($12\frac{1}{2}$) cents per kilowatt hour upon all consumption of current by a single consumer, for all in excess of two hundred and fifty (250) kilowatt hours consumed per month.

Third—That the minimum charge of two (\$2) dollars should be reduced to one dollar and fifty cents (\$1.50).

That the power and street-lighting rates should not be affected by any order made in this case.

AMENDED ORDER

OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA, CARSON CITY, NEVADA.

On the 6th day of September, 1913, all the Commissioners being present, pursuant to the foregoing opinion, it is ordered as follows:

First—That the so-called "A" rate, now applied by the respondent company in the city of Ely, be entirely eliminated and discontinued.

Second—That in lieu of the "B" rate, now applied by said respondent company in said city of Ely, the following rates be applied and made effective:

Seventeen (17) cents per kilowatt hour upon all consumption of current by a single consumer, for the first fifty (50) kilowatt hours consumed per month.

Sixteen and one-half ($16\frac{1}{2}$) cents per kilowatt hour upon all consumption of current by a single consumer, for the next one hundred (100) kilowatt hours consumed per month.

Fifteen (15) cents per kilowatt hour upon all consumption of current by a single consumer, for the next one hundred (100) kilowatt hours consumed per month.

Twelve and one-half ($12\frac{1}{2}$) cents per kilowatt hour upon all consumption of current by a single consumer, for all in excess of two hundred and fifty (250) kilowatt hours consumed per month.

Third—That the minimum charge of two (\$2) dollars be reduced to one dollar and fifty cents (\$1.50).

That the power and street-lighting rates are not to be affected by the order in this case.

That the rates above prescribed shall be made effective on or before the 1st day of October, 1913.

[SEAL]

Dated September 6, 1913.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

DISSENTING OPINION

SHAUGHNESSY, *First Associate Commissioner*:

I am unable to concur in the opinion and order rendered in this case. The Commission's order is predicated upon evidence submitted by the defendant company at the rehearing August 21, 1913, covering the operations of the light and power company for the fiscal year ending June 30, 1913. This showing carries a 16 per cent decrease in the gross earnings and a $2\frac{1}{2}$ per cent increase in operating expenses over the previous year. Compared with the business of the previous two years, or the average thereof, the showing for the said year 1913 is not representative, and is therefore not a fair basis upon which to determine the reasonableness of the rates.

From the exhibits submitted by the company at the rehearing, it is found that the gross earnings for the said year 1913 amounted to \$35,224.42, or a reduction of \$6,704 over the preceding year, and that the kilowatt hours sold will closely approximate 294,913. This consumption is classified as follows:

TABLE A

Lighting consumers using 50 KWH	92,203 KWH sold
Next 100 KWH	50,878 KWH sold
Next 100 KWH	24,598 KWH sold
Excess over 250 KWH	24,767 KWH sold
Minimum consumption (estimated)	19,000 KWH sold
City street lighting (estimated)	30,000 KWH sold
Power consumption (basis 1912)	53,467 KWH sold
Total KWH sold	294,913
Gross earnings	\$35,224.42
Average receipts per KWH sold	11.95 cents

On the basis of this consumption the Commission has ordered a 17-cent graduated scale of rates to be applied to the commercial lighting service, which, it will be seen by the following table, will produce aggregate earnings amounting

to \$40,405.44. This is an increase of \$5,180 over the earnings made from the rates voluntarily established and assessed by the company for the said year 1913:

TABLE B
On Basis of Consumption for Year Ending June 30, 1913

Class	KWH	Rate	Amount
First 50 KWH	92,208	17 cts.	\$15,674.51
Next 100 KWH	50,878	16½ cts.	8,394.87
Next 100 KWH	24,598	15 cts.	3,689.70
Excess over 250 KWH	24,767	12½ cts.	3,096.00
2.375 minimum		\$1.50	3,564.00
Less than minimum for part of month			228.13
Power			5,558.23
Nonoperating revenue			200.00
Total			\$40,405.44
Average receipts per KWH		18.73 cts.	
Operating expenses and taxes			32,847.02
Net earnings			\$7,558.42
Depreciation			2,500.00
Net profit			\$5,058.42
On \$57,117 value			8.8%

It is to be noted in passing that the effect of the Commission's order is also reflected by an increase in the average receipts per kilowatt hour from 11.95 cents to 13.73 cents.

As shown by the table below, the Commission, after disallowing certain amounts claimed by the company, finds that the deductions for the said year 1913 should be:

Operating expenses	\$31,477.42
Taxes	1,369.60
Depreciation	2,500.00
Total deductions	\$35,347.02

It will be observed that the gross earnings, less total deductions, is \$5,058.42, which is a net income return of 8.8 per cent on \$57,117, the reproduction value (new) of that portion of the company's property at Ely used in furnishing public service.

The Commission has reached its conclusion on the basis of the reproduction value (new) of the company's property, when, instead, the value of the property in its depreciated condition should have been used; the operating expenses are seemingly excessive and therefore open to criticism; also the order contemplates that the consumption for the year 1913 is fixed, and no recognition whatever has been given to the principle that a reduction in rates may result in a substantial increase in the volume of business usually sufficient to offset the apparent reduction in revenue which may be shown by a literal application of proposed reduced rates to any given amount of business transacted in the past.

The principles which underlie a proper determination of the case before us are clearly defined by the courts in the following cases:

GENERAL

. What the company is entitled to demand, in order that it may have just compensation, is a fair return upon the reasonable value of the property at the time it is being used for the public service. (*Smyth v. Ames*, 169 U. S. 466; *San Diego L. & T. Co. v. National City*, 174 U. S. 739; *San Diego L. & T. Co. v. Jasper*, 189 U. S. 439; *Willcox v. Con. Gas Co.*, 212 U. S. 19.)

What the public has a right to demand is that no more shall be exacted than the services rendered are reasonably worth. The public cannot be subjected to unreasonable rates in order simply that the stockholders may earn dividends. (*Corington Turnpike Co. v. Sanford*, 164 U. S. 578; *Smyth v. Ames*, 169 U. S. 466; *San Diego L. & T. Co. v. National City*, 174 U. S. 939; *M. & St. L. R. R. v. Minnesota*, 186 U. S. 257; *I. C. C. v. B. R. R. Co.*, 118 Fed. 613; *Kennebec Water Co. v. Waterville*, 97 Me. 187; *Water District v. Water Co.*, 99 Me. 371.)

VALUATION

The cost of reproduction is not a fair measure of value unless a proper allowance is made for depreciation, because all constructive

portions of the plant are subject to deterioration and to be worn out or consumed by use. (*Knoxville v. Knoxville W. Co.*, 212 U. S. 1; *Minnesota Rate Case*, 33 Sup. Ct. Rep. 762-764.)

Original cost is not a fair criterion of present value, because the plant may have cost too much, or it may be of unnecessary dimensions. If it has increased in value since its acquisition, the company is entitled to the benefit of such increase, if such increased valuation does not require a return so large as to be unreasonable or unjust to the public. (*Willcox v. Con. Gas Co.*, 212, U. S. 19.)

In *Spring Valley Water Company v. San Francisco*, 192 Fed. 137, Judge Farrington says:

The aggregate value of bonds and issued capital stock of the company at the present market prices is not a reliable index of the value of the plant, because such prices often rise and fall from the operation of causes which have little or nothing to do with the intrinsic value of the property; and the bonded or other indebtedness of the company may exceed the actual value of the property.

And again, in *Spring Valley Water Company v. San Francisco*, 192 Fed. 137, Judge Farrington says:

In *San Diego Land and Townsite Co. v. National City*, 174 U. S. 735, it is said that a fair return to which the owner of such property is entitled cannot always be based upon the total amount invested, because some portion of that which is required by the investment may be neither *necessary or presently useful* for the public service. But the fair return is to be based upon the fair present value of that which is used for public benefit, *having due regard always to the reasonable value.*

In *San Diego Land and Townsite Co. v. Jasper*, 189 U. S. 439, Mr. Justice Holmes says:

If a plant is built, as probably this was, for a larger area than it finds itself able to supply, or, apart from that, if it does not have the customers contemplated, neither justice nor the Constitution requires that, say, two-thirds of the contemplated number should pay a full return.

In *Water District v. Water Co.*, 99 Me. 371, Mr. Justice Savage said:

Suppose that a 500-hp. engine was used for pumping when a 100-hp. engine would do as well. As property to be fairly valued, the larger engine might be more valuable than the smaller one, and it could not be said that it would be reasonable to compel the public to pay rates based upon the value of the unnecessarily expensive engine.

In *S. P. v. Bartine*, 170 Fed. 725, Judge Farrington says:

If a railroad is built into a new and sparsely settled territory with a view of serving a larger future population and developing business, the Constitution does not require the few people and the small business of the present time to pay rates which would yield an income equal to the full return to be gathered when the country is populated and business developed to the full capacity of the road.

In the *Minnesota Rate Case*, 33 Sup. Ct. 762-764 (July 1, 1913), the Court said:

It is clear that in ascertaining the present value we are not limited to the consideration of the amount of the actual investment. If that has been reckless or improvident, losses may be sustained which the community does not underwrite. As the company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of the property involves the recognition of its fair value if it be more than its cost. The property is held in private ownership, and it is that property, and not the original cost of it, of which the owner may not be deprived without due process of law. But still it is property employed in a public calling, subject to governmental regulation, and while, under the guise of such regulation, it may not be confiscated, it is equally true that there is attached to its use the condition that charges to the public shall not be unreasonable. And where the inquiry is as to the fair value of the

property, in order to determine the reasonableness of the return allowed by the rate-making power, it is not admissible to attribute to the property owned by the carriers a speculative increment of value, over the amount invested in it and beyond the value of similar property owned by others, solely by reason of the fact that it is used in the public service. That would be to disregard the essential conditions of the public use, and to make the public use destructive of the public right.

* * * * *

It must be remembered that we are concerned with a charge of confiscation of property by the denial of a fair return for its use; and to determine the truth of the charge there is sought to be ascertained the present value of the property. The realization of the benefits of property must always depend in large degree on the ability and sagacity of those who employ it; but the appraisalment is of an instrument of public service, as property, not of the skill of the users. And when particular physical items are estimated as worth so much new, if in fact they be depreciated, this amount should be found and allowed for. If this is not done, the physical valuation is manifestly incomplete. And it must be regarded as incomplete in this case. (*Knoxville v. Knoxville Water Co.*, 212 U. S. 1.)

Judge Farrington, in treating the question of depreciation, in *Spring Valley Water Company v. San Francisco*, 192 Fed. 137, said:

The value to be ascertained is the value at the time of the inquiry. Only that property is to be considered which was then used and useful in supplying San Francisco with water. * * * And this was to be determined in part by considering "the depreciation suffered by that portion of the plant which is worn by use or action of the elements, or shorn of its value by newer, cheaper, and more efficient appliances and machinery"

IN RE INCREASE IN VOLUME OF BUSINESS BY A REDUCTION IN RATES
In *Railway Company v. Wellman*, 143 U. S. 343, Justice Brewer inquires:

Must it be declared, as a matter of law, that the reduction of rates necessarily diminishes income? May it not be possible—indeed, does not all experience suggest the probability that a reduction of rates will increase the amount of business, and therefore the earnings? At any rate, must the court assume that it has no such effect, and, ignoring all other considerations, hold, as a matter of law, that a reduction of rates necessarily diminishes the earnings?

In *Willcox v. Consolidated Gas Company*, 212 U. S. 51, the Court said:

And again, increased consumption at the lower rate might result in increased earnings, as the cost of furnishing gas would not increase in proportion to the increased amount of gas furnished.

In support of this view the Court uses the following illustration:

The elevated railroads in New York when first built charged 10 cents for each passenger, but when the rate was reduced to 5 cents it is common knowledge that their receipts were not cut in two, but that from increased patronage the earnings increased from year to year, and soon surpassed the highest sum ever received under the 10-cent rate.

IN RE REASONABLENESS OF OPERATING EXPENSES

Justice Brewer, in *Railway v. Wellman*, 143 U. S. 345, in reviewing the case, inquires:

Of what do these operating expenses consist? Surely before the courts are called upon to adjudge an Act of the Legislature fixing the maximum passenger rates for railroad companies to be unconstitutional, on the ground that its enforcement would prevent the stockholders from receiving any dividends on their investment, or the bondholders any interest on their loans, they should be fully advised as to what is done with the receipts and earnings of the company. * * * While the protection of vested rights of property is a supreme duty of the courts, it has not come to this, that the legislative power rests subservient to the discretion of any railroad corporation which may, by

unreasonable expenditures, or in some other improper way, transfer its earnings into what it is pleased to call operating expenses.

And again, Judge Morrow, speaking for the court in *Woodside (T. & G. R. R.) v. Railroad Commission of Nevada*, 184 Fed. 358, said:

There is another feature of this case that may be noticed, and that is the fact that the Railroad Commission has presented to us a statement of the expenses of the Tonopah and Goldfield Railroad as compared with the Nevada Northern Railway. The two roads are in Nevada, and have many features in common. It appears that the Tonopah and Goldfield Railroad is under a very expensive management as compared with the Nevada Northern Railroad, and that it is very much in excess for substantially the same service. Such expensive management, under the circumstances, will not justify higher rates to pay expenses and dividends to stockholders.

It is to be noted by the foregoing authorities that the courts recognize the principle that reduced rates encourage an increase of business and earnings, and also, while finding that both appreciation and depreciation in property value must be allowed when warranted, they keep uppermost in mind throughout their reasoning that rates must be just and reasonable. And in this connection, it is made clear by their findings that the enjoyment of just and reasonable rates by the public is not to be defeated by unwise or improvident investments or by unreasonable expenditures in operation due to obsolescence, overcapacity in plant facilities, and expensive management.

The engineer of the Public Service Commission by a very careful appraisal found that the reproduction value (new) of defendant's property used in the lighting and power service at Ely was \$57,117. The value of the property in its present depreciated condition he found to be \$41,058. In reproducing the plant (new) the valuation allowed for the different items by the engineer in this appraisal was generous, the land used in operation being valued by a comparison with the selling value of contiguous property. The plant and distribution system, including the cost of poles, fixtures, wire, materials, power-plant equipment, machinery, tools and implements, were put in at the going unit cost prices thereof. Buildings were put in on the basis of prices furnished for their duplication by two contractors at Ely.

In addition to the foregoing an addition of 20 per cent was allowed for cost of engineering, superintendence, contingencies, and interest during the construction of the plant. Thereafter the depreciable property (exclusive of land) was found to be \$50,000. To this was applied a rate of 5 per cent per annum for depreciation, and a valuation of \$41,058 was found to be the value of the property in its present condition.

Defendant put in evidence that its aggregate investment for plant and improvements amounted to approximately \$80,000, but it is to be observed in this connection that the plant has now been in operation six years, and during that time the land values of the company have greatly depreciated, and, as shown above, there has also been a very substantial depreciation in equipment and machinery. It is further to be noted that the investment was made at a time when everything was on a boom in the Ely district, with a population ranging from 50 to 100 per cent greater than it is today, and it was confidently expected by the company at that time that a greatly increased service over that which now obtains would be rendered. This has not materialized, and in consequence thereof the plant is today perhaps double the capacity actually necessary to render the public service at Ely.

In view of the foregoing, I am of the opinion that the fair rate of return to which the defendant is entitled, and the schedule of reasonable rates to which the public is entitled, should have been computed upon the basis of the value of the property in its present condition, viz, \$41,058.

At the present time the Ely Light and Power Company has a monopoly of the light and power business at Ely, which under a just and reasonable schedule of rates may well be perpetuated to the benefit of all concerned. It is nothing less than economic waste for the people to be required to franchise competing companies in order to bring about a correction in charges, which manifestly should come through the medium of an order by the public regulating authorities

requiring the established utilities to charge no more than a just and reasonable rate. The Commission must therefore, if public regulation is to be effective, have due regard for the rights of public as well as those of the corporation, and in this respect care should be taken to see that the findings are not made upon the basis of an *ex parte* showing.

Experience teaches that a reduction in rates usually increases the volume of business, and thereby offsets, in part, if not in whole, the reductions in revenue which appear to accrue by applying the reduced rate to a given volume of business transacted in the past at higher rates. Upon rehearing, however, the company contended that this would not be the necessary result of a reduction in its rates, but, on the contrary, alleged that its output was as great at the present time as could reasonably be expected for the future. In this connection, I confidently believe that the company is laboring under a misapprehension, but in the absence of an actual trial and experience, if it is assumed that the present business is not susceptible of further increase, I am forced to the conclusion that the present plant facilities and the investment which it represents is, upon the basis of the output, approximately twice as great as it need reasonably be in order to furnish the public service at Ely. This conclusion is drawn from the fact that the company maintains a plant having a capacity of 225 kilowatts, which includes its overload capacity. In contrast thereto, upon investigations made by the engineer of the Commission, covering a period of six months during 1911, it was found that the peak load was only 109 kilowatts. Upon the basis of this showing it is clearly apparent that the plant was built with a view of serving a larger future population, and of developing a larger business than it now has, and, as said in *San Diego Land and Townsite Company v. Jasper*, 189 U. S. 439, "if it does not have the customers contemplated, neither justice nor the Constitution requires that, say, two thirds of the contemplated number should pay a full return."

OPERATING RESULTS

I now proceed to review the operating results of the company, which are made clear by the following table (*italic figures denoting deficit*):

Item	TABLE C			
	1911	1912	1913	Average for 3-yr. period
Kilowatt hours generated	336,305	333,890	294,913	333,703
Gross earnings.....	\$42,092.84	\$41,923.25	\$35,224.42	\$39,748.50
Operating expenses.....	\$34,303.50	\$30,752.55	\$31,477.42	\$32,177.82
Taxes	1,111.14	817.68	1,869.60	1,099.47
Depreciation	2,500.00	2,500.00	2,500.00	2,500.00
Total deductions.....	\$37,914.64	\$34,070.23	\$35,347.02	\$35,777.29
Net earnings.....	\$4,178.20	\$7,858.02	<i>\$122.60</i>	\$3,971.21
Ratio of total deductions to gross earnings.....	90.07%	81.28%	100.35%	90.01%
Gross earnings, KWH generated	12.52c	10.92c	11.94c	11.74c
Total deductions, KWH generated.....	11.27c	8.88c	11.98c	10.56c
Net earnings, KWH generated	1.25c	2.04c	.04c	1.17c
Value of property less depreciation.....	\$46,058.00	\$48,558.00	\$41,058.00	\$45,558.00
Net return on value of property	9.075%	18.04%	<i>00.5%</i>	9.12%

From this table it is clearly apparent that the showing (1913) upon which the decision in this case rests is not representative, and therefore the order considers only the interests of defendant and not those of the public as well. The table also discloses that there is a deficit of three-tenths of 1 per cent in the net income return on \$41,058, the present value of the property for the year ending June 30, 1913, but, when the average for the three-year period (1911, 1912, and 1913) is taken, it will be observed that there is a net income return of 9.12 per cent upon the average value of the property in its depreciated condition.

Having reviewed the average earnings, expenses, and net income return for the fiscal year periods shown above, the operations of the company for the year ending June 30, 1912, are compared in statistical detail, by the table following, with the operations of the Steptoe Valley Smelting and Mining Company (serving McGill), the Winnemucca Water and Light Company (serving Winnemucca), and the Elko Water and Light Company (serving Elko), for the year ending June 30, 1913, for the purpose of basing a fair judgment as to the rates that should be charged, the efficiency of the plant, and economy of management of the Ely Light and Power Company:

TABLE D

Item	Ely Light and Power Company 1912		Steptoe Valley Smelting and Mining Company 1913		Winnemucca Water and Light Company 1913		Elko Water and Light Company 1913	
		Per KWH Cts.		Per KWH Cts.		Per KWH Cts.		Per KWH Cts.
Territory served.....	Ely		McGill		Winnemucca		Elko	
Population.....	3,000		3,000		2,000		2,000	
Value of plant.....	\$43,558.00		Not shown		\$65,000.00		\$46,000.00	
	41% steam		Steam		90% steam		Distillate	
	59% water				10% water			
KW hours generated.....	383,890		389,607		345,220		270,408	
<i>Earnings</i>								
Lighting earnings.....	\$36,155.35		\$15,039.30		\$18,455.44		\$25,589.47	
City lighting earnings.....	615.00				2,681.00		1,984.15	
Power earnings.....	5,157.90				1,056.24		435.35	
Miscellaneous earnings.....					1,020.00		3,094.00	
Total operating rev.....	\$41,928.25	10.90	\$15,039.30	3.86	\$23,212.68	6.71+	\$31,102.97	11.5+
<i>Operating expenses</i>								
Power.....	\$19,198.19	5.00+	\$4,623.28	1.16+	\$9,625.26	2.79-	\$11,906.01	4.40+
Distribution.....	3,141.13	.80+	5,782.87	1.48+	1,216.35	.35+	1,128.63	.42-
Consumption.....	739.32	.19+			1,070.15	.31-	2,267.88	.84-
General.....	6,958.38	1.82-	3,949.87	1.01+	501.68	.14+	5,131.28	1.89+
Undistributed.....	714.93	.19-			1,107.94	.32+		
Taxes.....	817.68	.22-	595.72	.16-	758.02	.22-	341.00	.13-
Total operating exp.....	\$31,570.23	8.22+	\$14,851.74	3.81+	\$14,279.40	4.13+	\$20,774.80	7.68+
Net earnings.....	\$10,358.00	2.68+	\$188.00	.05	\$8,933.00	2.58+	\$10,328.00	3.82+
Fuel expense.....	\$8,130.03	5.16	\$3,136.00	.85	\$4,738.00	1.52+	\$6,890.00	2.50
Amount of fuel, KWH.....	15 lbs. coal				*4.8 lbs.			
Water power expense.....	\$3,600.00	1.59-						
Salaries.....	\$12,950.00	3.37+	Not shown		\$4,980.00	1.44	\$6,845.00	2.53

*Crude oil—coal equivalent, 168 gals.=1 ton of coal.

The foregoing table speaks for itself. In explanation thereof it is well to note in the beginning that the rates charged at both Winnemucca and Elko for commercial lighting service are upon a 15-cent graduated scale, which was voluntarily established by those companies. The general conditions surrounding the operations of the lighting plant at Ely would seem to be more favorable generally than those obtaining at either Elko or Winnemucca, for the reason that there is a larger population to be served at Ely than at either of the other two points. Attention is directed to the fuel expenses shown in the table, from which it is observed that the cost thereof per kilowatt hour generated is grossly excessive, by comparison with those shown at Winnemucca and Elko. This in itself indicates that the plant efficiency of the defendant company is exceedingly low. Of the kilowatt hours generated from March, 1909, to March, 1912, 59 per cent was generated by water power; therefore, in finding the unit costs of operation by steam and water per kilowatt hour, the expenses thereof were divided by 41 per cent of the total kilowatt hours for steam, and by 59 per cent of the total kilowatt hours for water generation.

In passing, attention is directed to the fact that the Ely Light and Power Company increased its payment for water power to the Ely Water Company, a corporation under the same control and management as that of the defendant light and power company, from \$2,600 in 1911 to \$3,600 in 1912. In addition to this increase the defendant company at the rehearing contended that this rental should be increased to \$4,200 per annum. This service by the water and light companies is arranged in the following manner: The water company furnishes the town of Ely with water for domestic and commercial uses; in addition thereto it has a large surplus which is allowed to pass over the water-wheel of the light and power company (for the purpose of generating current), from whence it continues onward on its course to a ranch below Ely owned by the water company, from which an income of \$2,000 per annum is secured; or, in other words, this is an aggregate of \$5,600 per annum that the water company receives for this particular service. On the basis of the 1912 business, this amount is 28 per cent of the gross annual revenue earned by this company.

The book cost of the property shown by the water company is \$721,723, of which \$632,212 is shown as land used in the operation of the property. The Commission is not yet in receipt of the cost of reproducing the water company's property, and in the absence thereof it is impossible to state what percentage of return the company is earning upon the fair value of the property devoted to the public service at Ely. The land values are seemingly exorbitant. If excluded, the value of the property may be estimated as follows:

Cost of acquiring the water.....	\$105,000.00
Transmission and distribution system less depreciation (estimated).....	60,000.00
Land used in operation (estimated).....	35,000.00
Total value.....	\$200,000.00

The valuation of the land used by the Reno Water Company in operation, recently valued, was placed at \$38,783. Likewise, the land used in operation by the Tonopah Water Company cost approximately \$20,000.

In any event, whatever the real value of the property may prove to be, it is apparent that if the annual rental for water power is reduced to \$2,400, it will, when \$2,000 rental from land is added, and considering the cost of furnishing the service, render the same proportionate net return on the property as other classes of water service at Ely contribute. It may be argued that this water power is valuable for the reason that it produces economy over coal in the generation of electric current. But in this analysis it is clear that the public is not the beneficiary thereof, for the reason that the average cost of steam and water generation per KWH aggregates 3.06 cents at Ely, whereas at Winnemucca it is 1.52 cents and at Elko 2½ cents per KWH. I am therefore of the opinion that the present charge of \$3,600 per annum for water power is excessive, and that for the future it should not exceed \$2,400 per annum.

Recurring to Table D again, it is to be observed that if the Ely Light and Power Company should pay no more per KWH generated for fuel than is paid by Winnemucca and Elko (and I contend that equally as good efficiency should be secured), the economy effected would be as follows:

For the year 1912, 157,395 KWH was generated by steam at a cost of.....	\$8,130.08
157,395 KWH at 2½ cts. per KWH (the fuel cost at Elko) would be.....	3,934.87
Economy effected.....	\$4,195.16
Likewise 157,395 KWH at 1.52 cts. per KWH (the fuel cost at Winnemucca) would be.....	\$2,392.40
Economy effected.....	\$5,737.68

Further, comparing the expenses of officers and employees of the defendant company with those of the Elko and Winnemucca companies, it would seem that the expenses at Ely are excessive. By the exercise of reasonable economy, and without working any hardship, a reduction of approximately \$2,500 per annum should be made in these expenses.

Summarized, the reductions recommended are as follows:

Economy in fuel expense (basis Winnemucca).....	\$5,737.68
Economy in water-power expense.....	1,200.00
Economy in expenses of employees and officers.....	2,500.00
Total.....	\$9,437.68
Total deductions for the year ending June 30, 1913.....	\$35,347.02
Less economies shown above.....	9,437.68
Net result.....	\$25,909.39

On the basis of the consumption for the year 1913, and the expenses as reduced, the company will be enabled to operate at a substantial profit and at the same time give to the consuming public a reasonable schedule of rates upon the basis of a 12-cent graduated scale. The earnings thereunder, computed upon the said kilowatt-hour output for the year 1913, will be as follows:

TABLE E		KWH	Rate	Amount
First 150 KWH.....		143,081	12c	\$16,169.72
Next 100 KWH.....		24,598	10c	2,459.80
Excess over 250 KWH.....		24,767	8c	1,971.36
Minimum consumption.....		19,000		3,564.00
City lighting.....		30,000		615.00
Power consumption.....		53,467		5,568.28
Total.....		294,913		\$30,338.11
Average receipts per kilowatt hour.....			10.29c	
Total deductions.....				25,909.39
Net earnings.....				\$4,428.72
Net return upon \$41,058, the value of the property at the present time.....				10.8%

In view of all that has gone before, I am of the opinion that, in order to do justice as between the defendant company and the public at Ely, the Commission should make an order fixing the schedule of domestic and commercial lighting rates on the basis of a 12-cent graduated scale, as shown above.

J. F. SHAUGHNESSY,
First Associate Commissioner.

EXPLANATORY STATEMENT BY THE MAJORITY OF THE COMMISSION

As a general rule, the dissenting opinion by a minority of a court or a commission is the last word in the particular case. In this proceeding, however, the dissenting opinion, filed by our associate, is of a most exceptional character. It contains, in our judgment, errors, both in figuring and in reasoning, that are well calculated to mislead and convey a false impression of the merits of the case as well as of the propriety of the action of the majority in modifying the original order made. Therefore, it seems to us that in justice to ourselves, and to the end that the case may be fully understood by all parties interested, a further statement should be made by the majority.

In the opinion upon which the amended order was based no attempt was made to discuss the case in detail. It had been argued quite fully in the original opinion, and the majority of the Commission saw no reason to qualify any of the arguments therein contained. The order was modified solely because further investigation disclosed the fact that the original order would have reduced the earnings of the company to the very line of confiscation, if not actually crossing it. The dissenting opinion brings into the case figures which, as above suggested, are erroneous, reasoning which we regard as intrinsically unsound, and matter never at any time considered by the Commission as a whole. Hence, in our supplemental opinion it was impossible for us to anticipate and answer the matter contained in the dissenting opinion.

That this statement may be clearly understood and be measurably complete in itself, a brief résumé of the entire case seems timely and proper.

The proceeding was brought by the city of Ely, acting through its City Council, which, in turn, was represented by its City Attorney. The complaint was as formal as one ordinarily is that is filed in a court of law, and the answer was equally so. The issues were clearly and specifically defined. These were two: First, that the charges made by the company were discriminatory, and, secondly, that they were excessive.

The pleadings, and also the testimony, showed that the discrimination complained of resulted from the fact that the company had established two rates, known respectively as the "A" rate, and the "B" rate. The "A" rate was a charge of 8 cents per kilowatt hour for current consumed and 75 cents per month additional for each lamp installed. The "B" rate was 20 cents per kilowatt hour, flat, for all current used for commercial lighting purposes and in residences. This "A" rate operated in such manner that the charges were in no sense proportionate to the quantity of current consumed, those using the smaller quantity being in many instances charged more than were others using a larger quantity.

There was practically no testimony going to the question of the excessive character of the rates as a whole. That some of them were excessive was to be fairly deduced from the fact, already stated, that in many cases parties with a larger installation, but smaller consumption, were frequently charged more than others whose consumption of current was very much greater.

To do away with this discrimination, the Commission's order entirely eliminated the "A" rate, which was 8 cents per kilowatt hour and 75 cents for each lamp installed. In fact, the "A" rate appeared to be the chief cause for complaint.

At this point it is proper to observe that, although the hearing was held in the very midst of the community chiefly affected, and the local papers regularly adverted to the fact that such hearing was in progress, the people of Ely, as a whole, appeared to take very little interest in it. There was practically no attendance at the hearing, and not a single witness was placed upon the stand to give testimony going directly and specifically to the point of the alleged excessive character of the rates. In reaching its conclusion that the rates were excessive the Commission was compelled to draw its own deductions from the testimony, which went chiefly to the question of discrimination, together with the official records of this office, and the investigations of its own engineer, which investigations were made, in the main, acting conjointly with officials of the respondent company. As a result, after ordering the elimination of the "A" rate entirely, the Commission further ordered a heavy reduction of the "B" rate.

The flat rate of 20 cents per kilowatt hour was reduced to 15 cents per kilowatt hour per month for the first 50 kilowatts, $12\frac{1}{2}$ cents per kilowatt hour upon all consumption of current by a single consumer for the next 200 kilowatts consumed per month, and 10 cents per kilowatt hour upon all consumption above 250 kilowatt hours per month.

As stated in our supplemental opinion, a subsequent investigation through an informal hearing, in which our associate Commissioner took part, without objection, disclosed the fact that the rates as prescribed would leave the company practically nothing in the way of net return.

Suit had been brought by the company in the First Judicial District Court of this State, and the enforcement of the order had been restrained. It was obvious, to the majority of the Commission, at least, that, upon the showing as made, neither that court, nor any other in the State of Nevada, would sustain the order. Therefore, without going into detail in the supplemental opinion, the order was modified so as to prescribe a rate of 17 cents per kilowatt hour upon all consumption of current by a single consumer for the first 50 kilowatt hours per month; $16\frac{1}{2}$ cents per kilowatt hour upon all consumption of current by a single consumer for the next 100 kilowatt hours consumed per month; 15 cents per kilowatt hour upon all consumption of current by a single consumer for the next 100 kilowatt hours consumed per month; $12\frac{1}{2}$ cents per kilowatt hour upon all consumption of current by a single consumer for all in excess of 250 kilowatt hours consumed per month. Finally, that the minimum charge of \$2 be reduced to \$1.50—the latter being in conformity with the original order as made.

Our associate objects to this modification for reasons set forth in a dissenting opinion. As before stated, some of the figures employed by him are erroneous—so much so that they render the conclusions reached by him almost, if not quite, valueless, while some of his contentions, unsound, we believe, were brought to the notice of his associates for the first time when the dissenting opinion was completed, and when the case had been finally closed.

A GRAVE ERROR IN FIGURES

The second paragraph of the dissenting opinion (page 304, *ante*) contains the following language and figures:

From the exhibits submitted by the company at the rehearing, it is found that the gross earnings for the said year 1913 amounted to \$35,224.42, or a reduction of \$6,704 over the preceding year, and that the kilowatt hours sold will closely approximate 294,913.

Then comes a table in which the consumption is classified, and immediately after the table we find the following:

On the basis of this consumption, the Commission has ordered a 17-cent graduated scale of rates to be applied to the commercial lighting service, which, it will be seen by the following table, will produce aggregate earnings amounting to \$40,405.44. This is an increase of \$5,180 over the earnings made from the rates voluntarily established and assessed by the company for the year 1913.

Here our associate has fallen into a very grievous error in the use of his figures, which are calculated to show that, instead of reducing the rates or the earnings, the Commission has actually increased them. In view of the fact, already stated, that the rate in effect when the proceeding began was 20 cents per kilowatt hour, flat, and this rate was reduced to 17 cents, $16\frac{1}{2}$ cents, 15 cents, and $12\frac{1}{2}$ cents, according to the quantity used, it should be self-evident, at a glance, that the Commission did not increase the rates. Our associate's error lies in the fact that the earnings, under the rates voluntarily established by the company itself, were not \$35,224.42, but \$43,011.63, as shown by the annual report on file in this office, a difference, may it be said parenthetically, amounting to nearly \$8,000, a pretty substantial error to be allowed to creep into a dissenting opinion. Our associate's mistake is accounted for in this way: The \$35,224.42 represents, not the gross earnings of the company under its own original rates, but the estimates of our engineer as to what the earnings of the company would be upon the basis of the reduced rates prescribed by the original order.

THE ERROR EXTENDED

In the dissenting opinion (page 309, *ante*) Table C is found, which gives, among other things, the net earnings of the company for the years 1911, 1912, and 1913. For the year 1911, the net earnings are given at \$4,178.20; for the year 1912, at

\$7,858.02; for the year 1913, \$122.60 deficit. The average, as stated in the table, is \$3,971.21. Beginning at the top of page 11 we find this language:

From this table, it is clearly apparent that the showing (1913) upon which the decision in this case rests is not representative, and therefore the order considers only the interests of defendant, and not those of the public as well.

In answer to this, it is sufficient for us to say that if our dissenting associate's figures had been correct, and we had considered only the year 1913, we could not have made any reduction at all. Those figures indicate that the company actually earned nothing net that year, but, on the contrary, suffered a deficit of \$122.60, and upon such a state of facts we could hardly have refused to allow an increase of rates, whereas we substantially reduced them.

The majority of the Commission fully recognize the fact that they owe a solemn duty to the public, but that duty carries us no further than to see to it that justice is done to the public without injustice to the corporation. We have endeavored to act upon that principle in our decision in this case, and believe that we have succeeded fairly well.

THE TRUE FIGURES

The following table shows in detail the business of the defendant company for the three years covered:

Item	1911	1912	1913	Average for 3-yr. period	At prescribed rate—1913
KWH generated	336,305	383,890	375,048	365,081	375,048
Gross earnings	\$42,117.35	\$41,907.59	\$43,011.63	\$42,345.52	\$40,405.44
Operating expenses	\$34,308.50	\$30,752.55	\$31,477.42	\$32,177.82	\$31,477.42
Taxes	1,111.14	817.68	1,369.60	1,099.47	1,369.60
Depreciation	2,500.00	2,500.00	2,500.00	2,500.00	2,500.00
Total deductions	\$37,914.64	\$34,070.23	\$33,347.02	\$35,777.29	\$35,347.02
Net earnings	\$4,202.71	\$7,837.36	\$7,664.61	\$6,568.23	\$5,058.42
Ratio of total deductions to gross earnings	90.02%	81.3%	82.1%	84.4%	87.4%
Gross earnings per KWH generated	12.52¢	10.91¢	11.47¢	11.6¢	10.77¢
Total deductions per KWH generated	11.27¢	8.87¢	9.42¢	9.8¢	9.42¢
Net earnings per KWH generated	1.25¢	2.04¢	2.04¢	1.8¢	1.34¢
Value of property	\$57,117.00	\$57,117.00	\$57,117.00	\$57,117.00	\$57,117.00
Net return on value of property	7.35%	13.72%	13.41%	11.4%	8.8%

From the foregoing it will be seen that the company's net earnings were \$4,202.71 in 1911, \$7,837.36 in 1912, \$7,664.61 in 1913—an average of \$6,568.23 for the three-year period. Our rates as prescribed reduce this average net income a trifle more than \$1,500, and bring the percentage of return down from an average of 11.4 per cent to 8.8 per cent. If we take the year 1913 alone, the reduction of the revenues, and consequently to the consumer, is \$2,606, or from 13.41 per cent profit to 8.8 per cent. These are the reductions actually made.

THE VALUE OF THE PROPERTY

The dissenting opinion lays stress upon the fact that the value of the property engaged in this service was taken at \$57,000, in round numbers, which was the engineer's estimate of what it would cost to reproduce it new, while, as claimed by our associate, we should have taken its present value, which he gives at \$41,000. On this point we may say with propriety that at no time during the discussion of the case before reaching the final conclusion did our associate claim that the depreciated value should be taken as the basis, but at all times he seemed to be satisfied with the estimate of \$57,000, which the engineer of the Commission had placed upon the property.

We understand perfectly that, in its recent decision of the Minnesota rate cases, the Supreme Court of the United States held that the Master in Chancery erred in taking the value of the railroad properties new, instead of at their depreciated value. But the court said nothing as to what the extent of the depreciation allowance should have been, or how it should be ascertained.

There is no fixed rule upon that subject. The \$41,000, given by our associate, should, in fact, have been something more than \$43,000, but we do not regard

that difference as material, or very important. The Minnesota rate cases present the question of the proper valuation of the property of a public service corporation very differently from the manner in which the question arises here. In those cases, the Minnesota law and the orders of the Minnesota Commission were attacked upon the ground, among others, that the rates, as fixed, were confiscatory. The legal presumption was that both the law and the orders were valid. Judge Sanborn held them to be invalid upon the basis of a report made by the Master in Chancery, in which report the property was given its valuation new, instead of its reproduction cost in its depreciated condition. The court held that this was a fatal error in a proceeding brought to have the law and the orders declared void, but the court nowhere lays down the rule that in the actual work of rate-making the body which is invested with such power must consider only the depreciated value. It does not follow that, when such a body makes a reduction in rates, it must cut to the very lowest point at which the rates as prescribed would be sustained by a court. As a general rule, the rates as prescribed might be made still lower and still be upheld by the court in which the validity of the order was contested. When there are no strictly legal questions involved, a court will only hold an order reducing rates to be void when the point of confiscation is reached. Their only function is to determine whether or not the public service commission, which is a rate-making body, has violated the Constitution by confiscating the property of a public service corporation, or, what means substantially the same thing, taking the property of such corporation without just compensation. The reason why public service commissions usually stop considerably short of a confiscatory point is that investors are not, as a rule, willing to engage in business projects of any kind with the prospect before them of just barely escaping confiscation at the hands of a public service commission. In regulating public utilities there is much to be considered, separate and apart from the mere question of rates. While it is well settled that the rates shall be reasonable, the question of their reasonableness is to be determined by a consideration of every fact and circumstance which has a bearing, and also by a consideration of the principles of sound public policy. In this case we have endeavored to keep in mind everything which seemed to have a bearing, not only upon the cold law, but upon the equities of the situation as well.

ALLEGED EXCESSIVE SIZE OF PLANT

At this point it may be well for us to advert to another feature of the case to which our associate seems to attach great importance, viz, that the authorities hold that a public service corporation will not be permitted to earn a return upon a plant of excessive dimensions and cost. We fully grant the correctness of that principle, considered either in the abstract or with reference to the cases to which our associate refers; but, in our judgment, none of the cases cited by him fits the facts in this case. In the first place, it is not our judgment, and it is not the judgment of the engineer of this Commission, that the plant which is actually in use in the city of Ely is of excess size for the service required of it. It is true that the nominal capacity of the generator is 200 kilowatts, with an overload capacity of 50 kilowatts more. But the capacity of the plant, as a whole, is much less than 250 kilowatts. The company uses both steam and water power. Combined they develop 160 horsepower, capable of generating about 119 kilowatts—only 10 kilowatts above the peak load. This seems to us none too much excess power. The only material excess is in the generator, which constitutes but a small part of the total value of the plant, and cost about \$2,500.

The best judgment of our own engineer, and we accept that judgment as sound, is that the company would have been justified, and is justified now, in adding to the total effective capacity of the plant by the addition of a relay system of moderate cost to enable it to meet emergencies when portions of the present plant might be laid up for repairs.

We do not think that it is sound doctrine for us to hold that a public service corporation shall be tied down to the construction of a plant no larger than is actually needed for the service immediately to be performed. Every company engaged in such business has the right to look into the future and provide for increased business which seems reasonably in prospective. It is a well-known fact that it is much more economical to construct a plant of sufficient dimensions as an entirety than to add to it from time to time as the business increases, besides which, the plant which is constructed at once, and as an entirety, is usually more harmonious in its structure, more efficient, and more economically operated.

THE ACTUAL INVESTMENT

In this connection there is another feature which has a bearing, in our judgment, upon the equities of this case. In the city of East Ely some years ago this company constructed what is known in the case as the "New Plant" at a cost of about \$162,000. As intimated by our associate, this was done because of the prevailing belief that Ely was destined to become, in the near future, another Butte. In going to this enormous expense the company simply shared the popular belief, and it showed its confidence in the future of the camp by the expenditure of its own money. Had the hopes of the people of that city been realized, everybody of intelligence, who felt any interest in the matter, would have commended the company for its public spirit and manifest desire to aid in the development of the city and the district along progressive lines. In our original opinion we rejected the claim made by the company that it should be permitted to earn money upon the basis of this valuation. We took the position that the comparatively small population of the city of Ely should not be made to bear the burden of the mistakes of the company. To that opinion we still adhere. Nevertheless, as a matter of equity, we should give it some consideration, and be careful, in passing upon the value of the property actually used in the rendering of this service, not to cut it to an unreasonably low figure.

THE VALUATION ALLOWED

The records show that this company has invested, altogether, \$242,000 in its electric-light and -power plants in that district. The claim was made that the old plant alone, the one under consideration in this case, which is now serving the people of the city of Ely and vicinity, actually cost \$80,000. Our engineer cut that valuation to \$57,117. In the face of a total and unquestioned expenditure of \$242,000 for the construction of electric-light and -power plants in that district by this company, we cannot consider an allowance of \$57,000 as the actual value of the plant in use in any way excessive. As the matter now stands, we are permitting the company to earn 8.8 per cent on a basis of \$57,000 investment, when, in fact, it has actually invested \$242,000. We refer to this merely because of the equity which appears to be involved.

ALLEGED EXCESSIVE EXPENSES

The dissenting opinion also urges strongly that the operating expenses of this company are excessive. With that, however, we are not able to agree. It appears to us that the operating expenses are, speaking generally, fairly just and reasonable. Our associate presents no data, and no evidence, which would affect our judgment on this point. He simply claims that \$300 per month is too much to be paid for water.

WATER RENTAL

Attention has been directed to the fact that the current furnished by this company is produced partly by steam and partly by water. It appears from the testimony that about 55 per cent of the current is generated by steam, and 45 per cent by water. It further appears that the cost of the coal which is used in producing steam is about \$690 per month, while the cost of the water is \$300. Thus it will be seen that it costs about twice as much to generate current by steam as it does by water upon the basis of \$300 per month, which the company pays in water rent. If water could be secured sufficient to generate all of the current without the aid of any fuel, it is clear at a glance that a very large saving could be effected. Under such conditions we cannot regard \$300 per month water rental as excessive. Not a scintilla of evidence has been offered to sustain such a view. We merely have the opinion of our associate, and he seems to base that opinion upon the fact that the Government of the United States disposes of water rights at much lower figures. In this behalf it may be proper for us to say that the Government of the United States is not selling its land or water for commercial profit. It is disposing of the public domain upon the easiest terms possible, having in view the great object of upbuilding and developing the country. Millions upon millions of acres of the best land in the United States have been sold at \$1.25 per acre, and the most valuable of water rights have been acquired, figuratively speaking, for a song. But the very moment these lands and water rights passed into private ownership the law of commercialism came into play, and they advanced in value rapidly.

THE OWNERSHIP OF THE WATER

Our associate seems to be under the impression that the water rental of \$300 per month is excessive because the water is owned by some allied interests.

Just what those allied interests are has not been made clear in the case, but, in our view, it is immaterial. The water is worth its actual value, regardless of who owns it, and there is nothing in the record of this case which shows, or tends to show, that, if the water were owned by some other party, the company could get it for any lower rental than it is now paying. It seems to us that these considerations dispose of our associate's contention upon this point, but in passing from it we will advert once more briefly to the fact that the water costs the company very much less in proportion to the work that is done with it than does the coal. If the water were not available for use, the company would have to buy more coal. For the years 1912-1913 the average monthly coal bill was, in round figures, \$690. The coal generated 55 per cent of the current. Had it been used to generate the whole of the current, the cost would have been \$1,250 per month, in round figures, against \$990 now expended for coal and water together—a difference of about \$260 a month, or more than \$3,000 a year in favor of the water. The use of the water is the one large factor that has made a reduction of rates possible in this case.

THE SALARIES PAID

When we turn to the salaries paid the officials of this company, we are equally unable to find anything excessive. The manager is paid \$150 per month. Any man who is fit to occupy a position of that kind is certainly worth that salary. It is not a question of whether he puts in all of his time at the work or not. To perform his duty properly requires special knowledge and adaptation, which can only be acquired by long years of study and experience. The bookkeeper is paid the munificent salary of \$75 per month, while the attorney, one of the foremost lawyers of the State, receives what he himself has characterized as a "stately" salary of \$25 per month. The engineers, electricians, linemen, and other employees generally, of the company are paid standard wages and no more. Surely no objection can be urged to this, and the majority of the Commission are not willing to take a position in this case which would even suggest the propriety of a reduction in the compensation of those who are doing the work of this corporation.

JUDGE MORROW'S ORDER

The language of Judge Morrow, in the Woodside case, referred to in the dissenting opinion, has no application to a case like this. In the Woodside case, the expenses of superintendence on the Tonopah and Goldfield Railroad were shown to be several times as much as similar expenses upon the Nevada Northern, engaged in the same character of business, operating under similar conditions, but doing very much more business. Judge Morrow's language is to be considered in the light of the facts disclosed in that particular case. That language was general in its character, and was not really essential to a decision of the case. In fact, he was not deciding the case, but simply passing upon a motion for a temporary injunction, and he held that the company had not made out a *prima facie* case of confiscation.

Moreover, in the Woodside case the particular items constituting the extraordinary, excessive, and top-heavy expenses were clearly and specifically pointed out and brought to the consideration of the court. In this case our associate makes no specifications at all, except as is found in the naked claim, unsupported by any proof, that the \$300 a month water rental charged is too great.

LOWER RATES AND LARGER BUSINESS

Our associate, in his dissenting opinion, deals quite at length with the presumption that lower rates will lead to a larger business, and do not always mean a reduction of revenue. We accept that assumption as true when we consider it merely in the abstract or in its application to some particular case. At the same time the fact must be borne in mind that in all, or nearly all, of the cases where this *dictum* appears the reduced rates prescribed by law, or by the order of a commission, only had the effect of bringing the net earnings of the corporation a very little below what the court considered might be just and reasonable. A very instructive example is found in the case of *Willcox v. Consolidated Gas Company*, in 212 U. S., one of the most recent decisions of the Supreme Court bearing upon this question. In the case referred to the court expressed the opinion, in a general way, that 6 per cent would be a fair return upon the investment of that great corporation, which investment, by the way, amounted to a great many millions of dollars, and this in a city growing more rapidly than any other great city in the world, and where a large increase of permanent business could be reasonably

expected. It appeared from the testimony that the rates as prescribed by law would leave the company about $5\frac{1}{2}$ per cent. The court said that, in view of the uncertainties which attach to the estimated value of the properties of such corporations, and the further fact that the lower rates were likely to lead to some increased business, it did not feel justified in holding rates confiscatory which would yield the company a $5\frac{1}{2}$ per cent net return.

But in this case our associate would absolutely wipe out the net profits of the company and leave it to take its chances of getting more business in sufficient volume at some time in the future—nobody knows when—to put it upon a fairly remunerative basis.

COMPARISON WITH OTHER UTILITIES

In the dissenting opinion (page 310, *ante*) is a table of figures showing by comparison the earnings and expenses of the Ely Light and Power Company, the Steptoe Valley Smelting and Mining Company, the Winnemucca Water and Light Company, and the Elko Water and Light Company, the purpose being to make it appear that the ratio of operating expenses to earnings is higher in the case of the Ely Light and Power Company than in that of any other companies referred to. The value of this table for the purpose of the case in hand is not apparent. It is an easy matter to make comparisons of that kind. But there are hardly two public utilities, except railroads, in the State that are doing business under anything like the same conditions. Take, for example, the case of the Steptoe Valley Smelting and Mining Company, one of the utilities mentioned in the table. In the case of this company we find that the total operating revenue is \$15,039.30, while the total operating expense is \$14,851.74, showing a profit of only \$188. No value whatever is assigned to the plant. It is marked in the table "Not shown." Such a comparison is utterly valueless for any purpose. The table shows on its face that the Steptoe company is practically realizing no profit at all; that the operating revenues and the operating expenses almost balance each other, the difference being only \$188. The fact is that this electric-light plant is not run as a separate institution, but is a part of the great Steptoe Smelting and Mining Company's establishment at McGill, and the work of generating electricity there is merely incidental to the general work of that gigantic corporation.

CONDITIONS NOT THE SAME

Notwithstanding the fact that our associate assumes that conditions at Winnemucca and Elko are practically the same as they are at Ely, it is obvious that there is a very great difference. Elko and Winnemucca are both situated upon the main lines of the Central Pacific and Western Pacific Railroads, and the cost of fuel is very much less there than it is at Ely. This is something that neither the Ely Light and Power Company nor this Commission can control. Conditions of business are altogether different in the two places.

THE QUESTION OF PLANT EFFICIENCY

Our associate draws his deductions (pages 310-311, *ante*) from these differences in the ratio of operating expenses to revenues of the various plants mentioned. His conclusion seems to be that they mark inefficiency in the plant at Ely. How much truth there may be in this we have no way of knowing. There is nothing in the testimony that bears upon the subject. We can see no reason why the Ely company should voluntarily operate an inefficient plant at an increased and unnecessary cost. But, however it may be, it is not the function of this Commission to pry into every little matter of detail in the operations of a public service corporation. While the law of regulation of public utilities is yet largely in a formative state, it is well settled that no public service commission can take complete charge of the private business of a utility and dictate all of the details of its management. It is only in cases where there are extraordinarily heavy overhead charges and expenditures on a large scale that are plainly and palpably unnecessary that they are given consideration in determining what are just and reasonable rates to be charged for the service rendered.

Our dissenting associate's views upon this phase of the case, and this part of the dissenting opinion, were based upon matter that was never submitted to the defendant company for consideration and explanation. The evidence in the case, though, does indicate that, while it is possible savings in expense might be effected here and there, upon the whole the plant is being conducted and operated with reasonable economy. The evidence further shows that the rates prescribed will not yield the company more than 8.8 per cent upon what we think we have

shown to be a fair value of the property for rate-making purposes. To our minds this is conclusive of the case.

SUGGESTION OF A 12-CENT RATE

The dissenting opinion closes with the very remarkable suggestion that the rate might be properly fixed upon a graduated scale beginning with 12 cents. Again, we must say that this is the first time such a suggestion was ever made in the consideration of this case by the Commission. It appears for the first time in the dissenting opinion now under discussion. Our associate reaches the conclusion that the initial rate might be scaled down to 12 cents by making reductions in the expenses of the company amounting to something like \$8,000, but he nowhere shows, in detail, just how the scaling down shall be effected. He assumes that the expenses are excessive because they are higher than at Steptoe, at Winnemucca, or at Elko, but without a statement of details. Such an assumption is of no value. There is no presumption that the expenses of all plants operating at long distances apart, and under varying conditions, shall be the same. There may be special reasons why the expenses are comparatively low in the operation of the other plants. But, so far as the evidence in this case discloses, there is, in our judgment, no extravagance which would justify the Commission in arbitrarily attempting to scale down the expenses of the Ely Electric Light and Power Company to such an extent as would materially affect the conclusions reached in this case.

NECESSITY FOR MODERATION

Nearing a conclusion of this statement, the majority of the Commission desire to say that, in their decision of this case, they have acted in the very best of conscience. With just as much desire as men may legitimately have to serve the interests of the public, they do not believe that under the facts disclosed in this case they would have been justified in fixing rates lower than those prescribed in the amended order. We realize that if we are too drastic in our action, if we make our cuts too deep, and leave public service corporations with less than a fair return upon their investment, and less than a fair compensation for the service rendered, which is also an element to be considered, it is more than probable that any court in which the case is tried will hold our order void. In such a case the Commission is placed at a marked disadvantage. It suffers in its prestige, and loses the confidence of the courts, which expect a public service commission to act in a spirit of absolute fairness, both toward the public and the corporation involved. Besides, the people are the losers in failing to get the substantial measure of relief which would have come from a more moderate and carefully guarded order. But we may go even beyond this, and consider the work of this Commission in the light of public policy.

PUBLIC POLICY

There is no State in the American Union that needs the introduction of capital for the development of its resources more than does Nevada. We have a vast territory here and less than one inhabitant to the square mile. We have great natural resources, but they are latent, and nothing but the vivifying effect of capital will lead to their exploitation and development. The State is one of high general price levels—perhaps the highest in the United States. The wage scale is high by comparison with that which exists in any other American State, and this is always taken as a basis upon which to determine the general conditions of business throughout a community. When the wage scale is high, every one engaged in business of every kind expects to make correspondingly high profits. It is not to be supposed that a condition can exist in the State of Nevada whereby the business men, no matter what the kind or character of their business may be, can be held down to the 5, or 6, or even 7, per cent basis of profit which are the prevailing rates of interest in our country east of the Rocky Mountains, and at the same time pay the men who work for wages double the eastern scale. High wages and good profits of business must of necessity travel hand in hand. It is an inexorable principle of political economy. Nothing can be more certain than that action by this Commission which will deprive public utilities of a fair return upon the money invested will very seriously check the investment of capital in our midst, which means a retarding of the progress and prosperity of the State.

CONCLUSION

Finally, we wish to draw attention to the fact that, in making the amended order which our dissenting associate attacks, the majority of the Commission

were not courting a lawsuit, but getting rid of one already pending. Whether we consider the plant of the respondent company worth \$41,000 or \$43,000 or \$57,000, the cold fact which confronted us was that, upon a close and careful consideration of every item of revenue and expenditure, the rates as fixed would leave the respondent company no profit at all. No amount of theorizing will outweigh this fact. It is as certain as anything in legal proceedings can be that, upon the showing that the order deprived the company of all net revenue, the court would have held the order void. By amending the order as we did, we placed ourselves upon safe and sure ground and, at the same time, secured to the people of Ely a substantial measure of relief. The respondent company knew that it could defeat the 15-cent order, but it was morally certain that it could not defeat the order as amended, which prescribed a graduated scale beginning at 17 cents, and has put these rates into effect. The result is that we have made substantial progress. If conditions so change in the future as to make it desirable or proper to do so, the Commission can take another step along the line of reduction. One act or order of the Commission does not exhaust its powers. Conditions are all the time changing and there is always opportunity for further investigation by the Commission, which is a permanent body, always in session, and ever ready to deal with new conditions as they arise. This is the principle upon which both the Railroad and the Public Service Commissions have acted since their formation, and through which they have secured their best and most substantial results in the regulation of public utilities in this State. Many adjustments have been made upon the basis of rates a little higher than what we thought we were justified in asking for, and which we believed we might enforce in court. But we knew that, if we hewed too close to the line, we would be getting upon dangerous ground and running into lawsuits, which, at the very best, would involve delay in securing the relief desired, and which might very easily result in absolute failure to secure anything at all. Having the interests of the people in mind, we cannot but feel that this is the best and in every way the most practical course for both Commissions to pursue.

H. F. BARTINE,
Chief Commissioner.
W. H. SIMMONS,
Associate Commissioner.

Case No. 20—Alleged Excessive Water Rates in Tonopah.

This case is fully covered in an earlier part of this report.

Case No. 25—Alleged Excessive Lighting Rates in Tonopah.

This case was consolidated with Case No. 44, and is referred to again under the latter number.

Case No. 28—High-Tension Power Lines Crossing Telephone and Telegraph Lines Without Protection.

In further reference to the complaint of Ben Brown, which was made October 25, 1912, against the Truckee River General Electric Company on account of insufficient protection of the lines of the Postal Telephone and Telegraph Company where the high-tension lines cross over the latter lines, Mr. Geo. A. Campbell, manager of the electric company, advised this Commission on November 19, 1913, that proper protection had been made to the telegraph and telephone lines.

Case No. 32—Commercial Lighting Rates in Reno.

On December 12, 1912, the Public Service Commission on its own motion issued a citation to the Reno Power, Light and Water Company requiring it to appear and show cause, if any, why its commercial lighting rates should not be reduced.

Hearing of this case was held on February 3 and 4, 1913. A complete valuation of the company's property was made by H. P. Gillette, a valuation expert, and a copy of same filed with the Commission as an exhibit. This exhibit also included a full and complete discussion of the earnings,

expenses and other data in reference to the operations of the company for a number of years.

A decision in this case has not yet been made.

Case No. 33—Reasonableness of Water Rates for Residence Use in Reno.

On December 12, 1912, the Public Service Commission on its own motion issued a citation to the Reno Power, Light and Water Company requiring it to appear and show cause, if any, why its charges for water should not be graduated according to some just and reasonable classification.

Hearing of this case was held at the offices of the Commission on February 3 and 4, 1913. A complete valuation of the company's property was made by H. P. Gillette, and a copy of same filed with the Commission as an exhibit as in Case No. 32.

This case has not yet been decided.

Case No. 34—Reasonableness of the Commercial Lighting Rates of the Truckee River General Electric Company.

On December 12, 1912, the Public Service Commission on its own motion issued a citation to the Truckee River General Electric Company requiring it to appear and show cause, if any, why its commercial lighting rates should not be reduced.

Hearing of this case was held at the office of the Commission on February 3, and 4, 1913. A complete valuation of the company's property was made by H. P. Gillette, and copy of same filed with the Commission as an exhibit as in Cases No. 32 and No. 33.

This case has not yet been decided.

Case No. 35—Electric Meter Alleged To Be Registering Too Fast.

On January 8, 1913, a communication was received from Judge E. S. Farrington requesting this Commission to have the electric meter in the drug store building at Elko, tested for accuracy, as it was his opinion that the meter was registering too fast.

Accordingly, a test was made under the direction of the Commission and the meter was found to be registering 3 per cent too fast. The meter was adjusted to register correctly, and the case was closed satisfactorily.

Case No. 36—Rates for Water Service in Virginia City.

This case is fully covered in earlier pages.

Case No. 37—Alleged Poor Water Service.

Under date of February 27, 1913, complaint was received from Ralph R. Landes of Austin, Nevada, alleging that on account of some of the water mains being frozen and others being clogged with dirt and sand, many patrons were unable to get water at their residences, and had to carry it a considerable distance from other faucets.

This complaint was promptly placed before the manager of the water company and he was called upon to put the water mains in proper order, which he did as promptly as possible.

Case No. 38—Refusal to Provide Sewer Service.

A complaint was received from Henry C. Schmidt of Tonopah, on March 7, 1913, alleging that the Tonopah Sewer and Drainage Company had refused to provide sewer service for one of his tenants. Upon investigation it was found that service had been denied for the reason

that two business places had the same service connection, and one party leasing one of the business houses had failed to pay his bills for the service.

This case has been consolidated with Case No. 40.

Case No. 39—Meter Deposit.

Under date of April 15, 1913, complaint was received from J. A. Sanders, District Attorney of Nye County, against the Nevada-California Power Company, on account of its demand from Harry Dunseath, Justice of the Peace, for \$15 meter deposit before he would be given light service.

The matter was taken up with the manager of the company at Goldfield with the result that the meter deposit required was reduced to \$10, and the case was thus satisfactorily adjusted.

Case No. 40—Various Complaints Against the Tonopah Sewer and Drainage Company.

Under dates of April 25 and May 5, 1913, several complaints were made against the Tonopah Sewer and Drainage Company by S. R. Moore and others of Tonopah, alleging excessive charges and unreasonable practices and regulations in assessing charges and in furnishing the service.

A hearing in this case was held before Chief Commissioner Bartine in Tonopah, beginning January 15, 1914. The case is still under consideration.

Case No. 41—Alleged Overcharge on Electric Bill.

Under date of May 9, 1913, complaint was received from W. B. Sayers, manager of the Nevada Mining, Reduction and Power Company of Dayton, Nevada, alleging an excessive electric bill for the month of April, 1913.

On May 21, 1913, the electric company presented to Mr. Sayers a corrected bill for April. The original bill was \$317.90 and the corrected bill \$49.75.

Later the electric company changed the location of Mr. Sayers's meters in such a manner that they do not now register the losses in the transformers, which results in a further reduction of about \$18 per month in his bills.

This complaint was later incorporated in Case No. 48.

Case No. 42—Alleged Inadequate Water Supply and Inadequate Water Pressure in Carson City.

This case is fully covered in an earlier portion of this report.

Case No. 43—Excessive Water Bill Alleged.

On May 15, 1913, Thomas McManus, secretary of Tonopah Miners Union No. 121, made a complaint against the Water Company of Tonopah, alleging excessive water bill for the month of April, 1913, and requesting this Commission to test his meter. Accordingly the meter was tested on July 21, 1913, and found to be registering correctly, and the case was closed.

Case No. 44—Alleged Excessive Electric Rates Charged by the Nevada-California Power Company.

The original complaint in this case was filed July 29, 1913, by the grand jury of Nye County, and alleged excessive lighting rates in Tonopah. The case was numbered 25. At a later date, however, the case

was consolidated with Case No. 44. The case has been fully covered in preceding pages.

Case No. 45—Gas Meter Registering Fast.

Complaint was made against the Carson City Coal Gas Company in July, 1913, by Parvin Jones, alleging that his gas meter had been registering too fast for a period of about eighteen months. The matter was taken up with the gas company, with the result that a discount of 5 per cent was made on all his bills for eighteen months and satisfactory settlement made on that basis.

Case No. 46—Alleged Overcharge on Gas Bill.

On June 15, 1913, a complaint was received from J. Connolly of Carson City against the Carson City Coal Gas Company alleging an overcharge on his gas bills. The gas company had been applying the lighting rate of \$3 per 1,000 feet, whereas they should have applied the heating rate, which is \$2.25 per 1,000 feet. The amount of overcharge, \$5.30, was promptly refunded to Mr. Connolly when the attention of the gas company was called to the error.

Case No. 47—Alleged Excessive Electric Rate.

During the month of June, 1913, the Goldfield Hotel Company of Goldfield made a complaint against the Nevada-California Power Company, alleging excessive rates for light and power.

The complaint was disposed of by the general rate reduction made in Case No. 44, fully explained in earlier pages.

Case No. 49—Investigation of Electric-Power Rates in Reno.

On July 29, 1913, the Commission on its own motion issued a citation to the Reno Power, Light and Water Company, notifying it that an investigation would be made into all of its rates and charges for electric current for power purposes, together with its regulations and practices in rendering service, and especially the custom of charging for installed horsepower; that said investigation would begin at the office of the Commission on August 22, 1913, and citing the company to appear and make such showing as it desired.

The case was postponed by agreement and the hearing held on October 11, 1913. This case is still pending.

Case No. 50—Objection to Introduction of Meter System in Sparks.

On August 4, 1913, a communication was received from C. O. Wentworth of Sparks, stating that it was rumored that the Reno Power, Light and Water Company was about to install meters and charge for water on the meter basis, and protesting against such a system of charges.

The Reno Water Company made no attempt to install meters, therefore no action was necessary on this complaint.

Case No. 51—Alleged Excessive Water Rates at Wonder.

This case is fully covered in an earlier part of this report.

Case No. 52—Objection to Proposal of Electric Company to Move Switch.

Under date of August 18, 1913, a communication was received from H. J. Grubnau of Sparks, complaining against the Reno Power, Light and Water Company because that company proposed to move his electric switch from its location inside his bathroom to a place on the outside.

The matter was taken up with the electric company and promptly adjusted to the satisfaction of the complainant.

Case No. 53—Disconnection of Sewer.

Under date of March 16, 1913, Antone Favero of Tonopah made a complaint to this Commission on account of the action of the agents of the building in which his business is being conducted, in disconnecting the sewer system. The complainant was notified that this Commission had no jurisdiction over such a matter.

Case No. 54—Alleged Overcharge on Water Bill.

On September 17, 1913, P. F. Beardsley of Tonopah made a complaint against the Water Company of Tonopah, alleging an overcharge on his water bill for August.

He was charged \$2.50, whereas his bill should have been but \$2, as he occupies only three rooms, and the minimum charge should have been applied. The water company was notified to that effect and the complaint adjusted.

Case No. 55—Method of Removing Meter.

In September, 1913, complaint was made by Mrs. Henry Elliott of Reno, on behalf of her mother, Mrs. Solomon of Carson City, against the Truckee River General Electric Company, on account of its employees having forcibly entered Mrs. Solomon's residence during her absence and removed an electric meter.

The matter was taken up with the company, and the manager was requested to caution his employees against similar action in the future.

Case No. 56—Alleged Excessive Minimum Charges for Both Water and Light.

A complaint was received by this Commission, dated August 12, 1913, signed by a number of citizens of Winnemucca, alleging excessive minimum charges for both water and electric service by the Winnemucca Water and Light Company.

On September 30, 1913, citation was issued to the company, answer to the same being made October 18, 1913. Hearing in this case was held at Winnemucca before Commissioner Simmons on December 5 and 6, 1913. The case is now fully submitted and ready for final action by the Commission at an early date.

Case No. 57—Alleged Discriminatory Water Rates in Carson City.

On October 6, 1913, a complaint was made against the Carson Water Company by several citizens of Carson City alleging excessive and discriminatory rates and inadequate service.

Citation was issued to the water company October 20, 1913, and the case came to a hearing at the office of the Commission, all Commissioners being present, on November 25, 1913.

The valuation of the company's property and plant is now being made, and as soon as the same is completed the case will be ready for final disposition.

Case No. 58—Alleged Excessive Rates for Sewer Service.

On October 22, 1913, citation was issued to the Tonopah Sewer and Drainage Company, notifying that company that in view of numerous complaints with respect to its charges, service, rules and regulations, the entire subject-matter of the case now pending (Case U 19) would be

reopened, and, on its own motion, the Commission would continue its investigation.

The further hearing was held before Chief Commissioner Bartine in Tonopah on December 15 and 16, 1913, and the case is now ready for an early decision.

Case No. 59—Alleged Excessive and Discriminatory Rates for Ditch and Canal Service.

On November 4, 1913, complaint was received by this Commission, signed by a number of water users along the Steamboat Canal, alleging excessive and discriminatory charges by the Steamboat Canal Company. On November 6, 1913, citation was issued to the canal company, requiring it to answer the complaint, which answer was received by the Commission November 27, 1913.

This case has been set for hearing in Reno on February 27, 1914.

Case No. 60—Alleged Overcharge on Electric Bills.

Under date of December 13, 1913, a complaint was made by Mrs. Minnie Abbott of Tonopah against the Nevada-California Power Company, alleging an overcharge on her electric bills for a long period of time. Mrs. Abbott conducts a lodging-house and burns certain lights all night for the convenience of lodgers, and claims she should have the same rate classification as hotels.

The complaint was promptly taken up with the company, and it is hoped that a satisfactory adjustment will soon be made.

Case No. 61—Alleged Failure to Comply with an Order of this Commission.

On December 17, 1913, a complaint was received from P. L. Flanagan against the Reno Power, Light and Water Company, alleging that that company had failed to comply with the order of this Commission in Case No. 3, in that the company had not cleaned its reservoirs as commanded in said order.

This complaint is being investigated and will be taken up in connection with a new case against the same company, recently received by the Commission.

CONNECTION WITH RAILROAD COMMISSION

The Public-Service Commission may be regarded as thoroughly established and on a sound working basis. The results attained during the last year are of the most gratifying character, and conclusively prove the wisdom of creating the Commission. In preceding pages of this report attention was directed to the fact that the Public Service law in effect is merely an extension of the Railroad Commission law. If the Legislature, in the exercise of its best judgment, had seen fit to make a few amendments to the Railroad Commission law, the last-named law could have been so extended in its scope as to cover everything material now contained in the Public Service law. But the Legislature chose to enact a separate statute dealing with electric-light and -power companies, gas companies, water companies, and sewer companies, rather than amend the Railroad Commission law so as to include those utilities. Perhaps this was because the policy of regulating the last-named utilities was looked upon merely as an experiment, and it was deemed better not to inject new matter into the Railroad Commission law which might create prejudice and possibly endanger the Railroad Commission law itself. However that may be, the Public Service law adds no more to the expenses

of our state government than would have resulted from amending the Railroad Commission law in such manner as to cover these additional utilities. These considerations indicate very clearly that the Public Service Commission should be regarded as part and parcel of the Railroad Commission. The basic principles upon which public utilities are officially controlled are exactly the same, regardless of the nature of the utility—whether it be a railroad or an electric-light company. The work of the Railroad Commission in dealing with railroads had, therefore, in a fair degree, fitted its members for the regulation of other utilities. Had the Public Service Commission been created unconnected with the Railroad Commission, the members of such Commission would necessarily have been entirely new to the work, and it is not in any spirit of self-praise that we suggest that the work has been more efficiently done by the members of the Railroad Commission, with their years of experience, than it could have been by entirely new men, unless, perchance, three men could have been found with previous experience along the lines of such work. New men would have had everything to learn, even to the law of regulation.

IMPORTANCE OF COMMISSION'S WORK

In order to justify the permanent maintenance of the Public Service Commission, it is not necessary for us to anticipate a continued and heavy cutting of rates. As intimated in the report of the Railroad Commission, there is a line of reduction that cannot and ought not be crossed if we have the principles of justice and the best interests of Nevada at heart. If we cross the line of confiscation, any court in which the orders are contested will hold them to be void. But it should not be our policy to go anywhere near the line of confiscation, because, if we do, it will very seriously check the investment of capital in public utilities and greatly retard the progress and prosperity of the State. What in business and social life are regarded and spoken of as "modern improvements" result almost, if not quite, in their entirety from the operations of public utilities. Eliminate our railroads, express, telegraph, telephone, electric-light and -power, water, and sewer companies and we would be at once turned back a full century in our industrial and social condition. Therefore, while at all times endeavoring to bring about proper readjustments both of rates and service rendered by these utilities, we must also be careful not to become so drastic as to alarm capital, and thus seriously check, if not entirely stop, the investment of money in those enterprises that are so essential to the progressive development of our State.

If it should so happen that the Public Service Commission never makes another reduction in rates, which is not all likely, it would still be the height of unwisdom to dispense with the Commission. The correctness of this statement will be clearly apparent when it is considered that if the Public Service Commission were to go out of existence tomorrow, there would be nothing to prevent public utilities over which it has jurisdiction from immediately restoring the old rates or even making them higher in order to recoup the losses they have sustained by the reductions to which they have been subjected. The courts are powerless to establish reasonable rates. The Legislature has power to prescribe rates to be charged by all public utilities; but experience has shown that it is neither wise nor effective to attempt to regulate utilities through arbitrary, nonelastic statutes which may be held valid with respect to some utilities and void with reference to others, or void *in toto*. Regula-

tion through commissions, which are administrative boards armed with certain judicial powers, has been found to be the only just and effective method of regulating those individuals, companies, and corporations that are engaged in rendering service to the public. The reason is that such commissions can take up each case upon its own merits and determine it upon the basis of its own circumstances. Our study of the work of regulating utilities in other States justifies us in expressing the opinion that the Public Service Commission of this State has accomplished all that could reasonably be expected of it up to the present time. The Commission has been able to give substantial relief in a very large number of cases, some, as shown, of great magnitude, and all, as we believe, without injustice to the utility.

The most careful attention of all interested in the welfare of the State, and particularly the attention of those who may be called upon to represent the people in the next Legislature, is earnestly invited to the foregoing pages which cover, in the main, both generally and specifically, the work of this Commission during the year 1913 and a part of its work in 1914.

All of which is respectfully submitted.

H. F. BARTINE,
Chief Commissioner,
J. F. SHAUGHNESSY,
First Associate Commissioner,
W. H. SIMMONS,
Second Associate Commissioner.

E. H. WALKER, *Secretary.*

**ANNUAL REPORTS OF ELECTRIC, WATER AND
GAS UTILITIES FOR THE YEARS ENDING
JUNE 30, 1912 AND 1913.**

WATER COMPANIES
POPULATION OF TERRITORY SERVED, AND INCOME ACCOUNT

Company	Population of territory served		Total operating revenues		Total operating expenses	
	1912	1913	1912	1913	1912	1913
Austin Water Company	600	500	\$3,194.50	\$3,000.25	\$3,157.20	\$2,153.90
Carson Water Company	2,700	2,700	16,174.86	16,111.50	4,246.65	4,535.28
City of Fallon Water System	2,000	1,200	19,948.81	6,717.51		2,699.43
Elko Water and Light Corporation	3,000	2,000	20,242.49	20,588.32	13,924.20	11,935.65
Ely Water Company	11	11	2,094.30	2,128.40	9,169.55	10,711.34
Emeralda Water and Milling Company	400	500	3,874.53	4,279.63	6,827.16	7,157.96
Eureka Water Works	6,000	5,000	94,991.68	83,301.74	2,620.41	3,261.48
Goldfield Consolidated Water Company	250	200	2,296.70	2,105.30	35,917.96	40,075.02
Hawthorne Water Works	210	200	4,969.14	4,201.94	1,029.93	1,078.52
Indian Springs Water Company	1,600	2,250	6,251.45	6,882.11	4,639.69	3,989.28
Las Vegas Land and Water Company	900	1,000	4,826.49	1,976.40	5,370.30	5,344.76
Manhattan Water Company ^a	300	500	1,800.40	2,630.38	3,000.00	1,687.11
Manhattan Water Company ^b	13,500	13,500	91,239.78	93,156.75	25,802.21	27,652.96
Mason Water, Light and Power Company	120	80	1,316.65	1,063.50	1,204.41	1,200.15
Reno Power, Light and Water Company	5,000	7,000	8,882.00	8,978.04	5,168.84	6,076.10
Tonopah Sewer and Drainage Company	3,143	3,143	114,400.53	94,506.45	74,105.03	57,050.49
Virginia and Gold Hill Water Company	5,000	500	2,316.00	2,325.00	444.00	1,224.00
Virginia Ranch Land and Cattle Company	5,000	5,000	93,814.16	124,167.94	32,864.57	50,875.82
Water Company of Tonopah ^c	2,500	2,500	10,147.92	12,649.83	11,637.75	5,096.06
Winnemucca Water and Light Company	200	200	3,070.60	4,380.10	3,978.15	6,595.48
Wonder Water Company	47,934	50,984	\$506,872.98	\$524,167.19	\$246,026.99	\$255,527.43
Totals						

^aReport of owners of the plant.^bReport of H. Z. Peters, leases of the plant.^cFormerly incorporated under the name of the Tonopah United Water Company.

WATER COMPANIES
INCOME ACCOUNT

Company	Taxes paid		Total operating expenses and taxes		Net operating revenue or deficit	
	1912	1913	1912	1913	1912	1913
Austin Water Company.....	\$200.70	\$179.90	\$3,357.90	\$2,333.90	\$163.40	\$666.45
Carson Water Company.....	2,337.01	1,576.16	6,583.66	6,211.44	9,591.19	9,900.06
City of Fallon Water System.....				2,699.43		4,018.08
Elko Water and Light Corporation.....	435.06	517.09	14,327.26	12,452.74	6,621.56	10,335.56
Ely Water Company.....	951.64	700.97	10,121.09	11,412.31	10,121.40	9,176.61
Hamersley Water and Milling Company.....	951.64	168.00	6,988.80	7,325.86	4,894.50	5,197.46
Hecla Water Works.....	355.00	456.80	2,976.41	3,718.28	889.12	951.45
Goldfield Consolidated Water Company.....	2,210.18	2,592.00	38,128.16	42,877.02	56,963.52	40,724.72
Hawthorne Water Works.....	123.00	78.00	1,088.58	1,156.52	1,197.77	945.75
Indian Springs Water Company.....	123.81	183.11	4,763.50	4,172.39	225.64	1,329.15
Las Vegas Land and Water Company.....	260.36	187.56	6,680.66	6,452.51	620.79	1,220.26
Manhattan Water Company.....	6.50	59.00	3,006.50	1,746.11	1,819.09	2,594.20
Mason Water, Light and Power Company.....	42.21	548.30	971.77	3,680.00	1,594.20	3,864.34
Reno Power, Light and Water Company.....	42.21	3,317.53	25,892.21	1,740.04	65,437.57	62,186.36
Ruby Hill Water Works.....	30.00	15.00	1,264.41	1,216.16	82.24	82.24
Tonopah Sewer and Drainage Company.....	569.00	504.90	5,734.84	6,561.00	3,165.46	2,397.04
Tonopah and Gold Hill Water Company.....	4,798.08	4,894.83	78,843.11	61,422.02	35,559.42	33,084.08
Virginia Ranch Land and Cattle Company.....	53.00	53.00	87.01	1,777.00	810.00	1,049.00
Water Company of Tonopah.....	2,384.01	2,688.00	35,249.58	53,563.92	58,565.58	70,804.12
Winemeca Water and Light Company.....	373.83	379.01	12,010.68	6,416.07	7,462.71	7,174.72
Wonder Water Company.....	425.00	108.00	4,408.15	6,708.46	7,353.55	2,353.55
Totals.....	\$15,691.98	\$18,159.15	\$261,718.97	\$273,686.58	\$248,324.78	\$250,480.61

*Report of owners of the plant.

bReport of H. Z. Peters, lessee of the plant.

cIncludes both water and light departments.

dSee electric report.

eFormerly incorporated under the name of the Tonopah United Water Company.

Italic figures denote deficit.

WATER COMPANIES INCOME ACCOUNT

Company	Nonoperating revenues		Gross corporate income or loss		Interest on funded debt	
	1912	1913	1912	1913	1912	1913
Austin Water Company.....			\$153.40	\$655.45		
Carson Water Company.....	\$35.25	\$42.40	9,625.44	9,812.46		\$3,680.60
City of Fallon Water System.....				10,318.08		
Elko Water and Light Corporation.....			5,621.56	10,335.95		
Ely Water Company.....	2,057.50	4,040.10	12,175.90	13,216.71	\$15,300.00	15,300.00
Esmeralda Water and Milling Company.....			4,894.10	5,167.41		
Evans Water Works.....		29.10	56,863.52	40,794.72		
Goldfield Consolidated Water Company.....			1,197.77	948.75	16,080.00	15,480.00
Hawthorne Water Works.....			225.64	25.55		
Indian Springs Water Company.....	87.09	105.46	707.88	1,536.26		
Las Vegas Water and Water Company.....				1,536.26		
Las Vegas Water Company.....				290.39		
Manhattan Water Company.....	100.00		1,919.99	2,564.30		
Mason Water, Light and Power Company.....			(c)	896.84		(c)
Reno Power, Light and Water Company.....	497.15	60.46	65,934.72	62,246.82		
Ruby Hill Water Works.....			82.24	11.55		
Tonopah Sewer and Drainages Company.....			3,155.16	2,513.94	1,410.00	1,410.00
Virginia and Gold Hill Water Company.....		116.90	35,557.42	33,065.08		
Virginia Ranch Land and Cattle Company.....			1,819.00	1,049.00		
Water Company of Tonopah.....	1,905.89	223.41	60,472.47	71,032.53	12,680.00	41,370.00
Winnemucca Water and Light Company.....	385.00		1,447.71	7,174.76		
Wonder Water Company.....			1,332.55	2,353.58		9.70
Totals	\$5,078.88	\$4,620.83	\$248,403.66	\$255,101.44	\$45,480.00	\$77,250.30

^aReport of owners of the plant.

^bReport of H. Z. Peters, lessee of the plant.

^cSee electric report.

^dFormerly incorporated under the name of the Tonopah United Water Company.

Italic figures denote deficit.

WATER COMPANIES INCOME ACCOUNT

Company	Other deductions from gross corporate income		Net corporate income or deficit		Dividends paid	
	1912	1913	1912	1913	1912	1913
Austin Water Company		\$2,929.30	\$153.40	\$2,292.55		
Carson Water Company			9,926.44	9,942.46	\$10,000.00	\$10,000.00
City of Fallon Water System				10,331.39		
Elko Water and Light Corporation		b4.17	5,621.56	5,247.39	8,800.00	9,600.00
Ely Water Company	\$895.90	d1,138.10	3,817.00	5,197.44		
Emerald Water and Milling Company			4,894.50	889.12		
Eureka Water Works			889.12	690.46	689.12	680.46
Goldfield Consolidated Water Company			35,660.64	18,396.96	689,569.84	166,389.76
Hawthorne Water Works	15,132.98	\$6,877.77	1,197.77	948.78		
Indian Springs Water Company			223.64	28.56	14,115.20	14,115.20
Las Vegas Land and Water Company			707.88	1,503.26		
Manhattan Water Company		m1,976.40		230.28		
Manhattan Water Company ^a	(n)	1,919.99		887.80		
Mason Water, Light and Power Company		\$234.66		646.68	(n)	(n)
Reno Power, Light and Water Company	92,500.00	63,434.72		59,746.82		
Ruby Hill Water Works		82.74		177.64		
Shoshone Water and Light Company		1,745.49		1,138.94		
Topopah Sewer and Drainage Company		35,557.49		38,006.08		
Virginia and Gold Hill Water Company		810.00		1,049.00	37,500.00	32,500.00
Virginia Ranch Land and Cattle Company				1,049.00		
Water Company of Tonopah	929,129.64		18,662.83	6,670.76		
Whitewater Water and Light Company	d1,802.30		\$1,270.71	7,174.76		
Wonder Water Company			1,532.55	2,553.06		
Totals	\$39,260.82	\$52,063.71	\$163,662.84	\$125,787.43	\$100,874.16	\$113,145.41

^aNew reservoir, \$1,383.95; new pipe lines, \$1,545.35.

^bInterest on floating debt.

^cInterest on floating debt, \$689.90; balance miscellaneous.

^dInterest on floating debt.

^eAll net earnings paid to owners of plant.

^fInterest on floating debt, \$135.37; contractual sinking fund, \$4,292.37; miscellaneous, \$655.24.

^gInterest on floating debt, \$148.88; contractual sinking fund, \$6,122.31; miscellaneous, \$406.63.

^hOnly \$9,889.96 dividends taken out of income account.

ⁱOnly \$19,779.92 dividends taken out of income account.

^jDividends paid out of surplus and loss account.

^kReport of owners of the plant.

^lReport of H. Z. Peters, lessee of the plant.

^mRoyalty to owners of plant.

ⁿSee electric report.

^oWashoe Deep Well Water Company, rental.

^pFormerly incorporated under the name of the Tonopah United Water Company.

^qInterest on floating debt, \$592.31; contractual sinking fund, \$22,333.33; depreciation, \$6,204.

^rContractual sinking fund requirements.

Italic figures denote deficit.

**WATER COMPANIES
INCOME ACCOUNT**

Company	Other deductions from net corporate income		Surplus or deficit for year		Total surplus or deficit at close of year	
	1912	1913	1912	1913	1912	1913
Austin Water Company			\$163.40	\$2,262.85	\$586.15	\$1,677.70
Carson Water Company			373.56	57.54	138.78	81.24
City of Fallon Water System		\$227.70		109.78		118.03
Elko Water and Light Corporation			3,178.45	731.39		
Ely Water Company			3,817.00	3,241.39		30,727.23
Emeralda Water and Milling Company			4,894.50	5,197.46	27,226.62	25,317.56
Eureka Water Works					20,140.10	
Goldfield Consolidated Water Company			25,760.58	1,412.97	55,767.17	74,127.17
Hawthorne Water Works			1,197.77	948.78		
Indian Springs Water Company			1,225.64	29.55	14,460.52	15,906.60
Las Vegas Land and Water Company			707.88	1,503.26	10,484.61	8,053.62
Manhattan Water Company ^b				230.29		
Mason Water, Light and Power Company			1,919.99	587.80		
Reno Power, Light and Water Company			(d)	605.68	625.54	628.07
Ruby Hill Water Works			61,721.73	59,746.82	(d)	(d)
Toponah Sewer and Drainage Company			82.24	121.65		
Virginia and Gold Hill Water Company			1,745.16	1,103.94		747.68
Virginia Ranch Land and Cattle Company			1,912.58	566.03		
Water Company of Tonopah ^c			1,819.00	1,049.00		
Winnemucca Water and Light Company			18,652.93	6,670.78	271,466.56	6,670.78
Wonder Water Company			3,270.01	7,174.76	3,270.01	3,785.06
			1,332.55	2,333.08	4,645.21	6,978.29
Totals		\$227.70	\$94,860.87	\$53,089.36	\$279,921.64	\$15,968.67

^aIncrease in surplus account adjustments made in profit and loss account.

^bReport of owners of the plant.

^cReport of H. Z. Peters, lessee of the plant.

^dSee electric report.

^eFormerly incorporated under the name of the Tonopah United Water Company.

Italic figures denote deficit.

**WATER COMPANIES
OPERATING EXPENSES**

Company	Pumping expenses		Distribution expenses		Commercial expenses	
	1912	1913	1912	1913	1912	1913
Austin Water Company	\$1,103.00	\$30.00	\$543.76	\$310.60	\$338.25	\$350.00
Carson Water Company	1,225.00	1,323.00	589.50	702.38		555.78
City of Fallon Water System		925.16		256.50		38.00
Elko Water and Light Corporation		1,794.74		4,174.28	20.00	
Ely Water Company	1,770.32		7,703.08	3,294.09		
Esmeralda Water and Milling Company			2,783.22	4,522.04		
Eureka Water Works			4,118.06	642.71		382.30
Goldfield Consolidated Water Company			1,365.46	6,743.81		433.12
Hawthorne Water Works			5,557.23	110.72		
Indian Springs Water Company			39.52	437.76		
Las Vegas Land and Water Company	728.86	163.11	119.69			
Manhattan Water Company ^b	\$1,360.00	1,682.11	1,808.45	1,742.48	1,028.34	1,150.58
Manhattan Water Company ^c	2,891.00	2,580.00				
Mason Water, Light and Power Company		131.67				
Reno Power, Light and Water Company						
Ruby Hill Water Works			14,725.56	15,861.21	1,000.00	2,000.00
Tonopah Sewer and Drainage Company			76.82	92.25		9.90
Virginia and Gold Hill Water Company			968.82	448.75	94.00	
Virginia Ranch Land and Cattle Company			74,106.03	35,523.94		1,704.10
Water Company of Tonopah ^d	240.00	1,044.00			144.00	120.00
Winnemucca Water and Light Company	8,217.35	18,918.39	4,258.65	5,522.54	371.91	431.35
Wonder Water Company	1,576.71	2,362.26	8,727.30	1,606.34	480.00	530.30
Totals	\$34,067.06	\$52,025.18	\$130,136.23	\$36,421.53	\$3,474.50	\$7,703.43

^aWater purchased.^bReport of owners of the plant.^cReport of H. Z. Peters, lessee of the plant.^dFormerly incorporated under the name of the Tonopah United Water Company.

**WATER COMPANIES
OPERATING EXPENSES**

Company	General expenses		Undistributed expenses		Total operating expenses	
	1912	1913	1912	1913	1912	1913
Austin Water Company	\$1,172.20	\$963.30			\$3,157.20	\$2,153.90
Carson Water Company	2,432.15	2,509.90			4,246.65	4,535.28
City of Fallon Water System		962.00				2,699.43
Elko Water and Light Corporation	4,430.20	5,980.63			13,924.20	11,935.65
Ely Water Company	6,289.86	7,324.83	\$91.47	\$82.42	9,169.55	10,711.34
Emeralda Water and Milling Company	2,708.10	2,635.82			6,827.15	7,157.86
Eureka Water Works	1,205.50	2,236.47			2,570.96	3,261.48
Goldfield Consolidated Water Company	15,424.53	13,437.34			35,917.98	40,075.02
Hawthorne Water Works	990.41	967.80			1,029.93	1,078.52
Indian Springs Water Company	3,157.72	3,162.76	635.43	235.65	4,639.69	3,969.23
Las Vegas Land and Water Company	1,155.51	1,071.70			5,370.30	5,344.76
Manhattan Water Company ^a		5.00				1,687.11
Manhattan Water Company ^b	155.50	800.00	350.00		3,396.50	3,630.00
Mason Water, Light and Power Company		1,031.25	797.29	550.49	928.96	1,696.84
Reno Power, Light and Water Company	10,011.65	9,732.49	65.00	69.16	25,802.21	27,662.86
Ruby Hill Water Works	1,127.59	1,098.00			1,204.41	1,200.15
Tonopah Sewer and Drainage Company	4,064.02	5,627.35	32.50		5,168.84	6,076.10
Virginia and Gold Hill Water Company		12,171.90		7,850.55	74,106.03	57,050.49
Virginia Ranch Land and Cattle Company	60.00	60.00			444.00	1,224.00
Water Company of Tonopah ^c	20,016.66	25,803.54			32,864.57	50,675.82
Winnemucca Water and Light Company	658.50	429.49	195.24	178.67	11,637.75	6,096.06
Wonder Water Company	1,396.50	2,565.05			3,978.15	6,196.48
Totals	\$76,397.60	\$100,616.62	\$2,166.98	\$3,976.94	\$246,374.04	\$255,627.43

^aReport of owners of the plant.^bReport of H. Z. Peters, lessee of the plant.^cFormerly incorporated under the name of the Tonopah United Water Company.

WATER COMPANIES
TOTAL COST OF PLANT AND EQUIPMENT

Company	Cost at beginning of year		Additions during year		Cost at close of year	
	1912	1913	1912	1913	1912	1913
Austin Water Company.....	\$28,145.75	\$29,289.40	\$1,143.65	\$3,143.30	\$29,289.40	\$32,432.70
Carson Water Company.....	110,967.86	110,967.86			110,967.86	110,967.86
City of Fallon Water System.....	35,225.00	35,225.00		1,586.50		36,811.50
Elko Water and Light Corporation.....	129,300.00	137,100.00	7,800.00	12,760.00	137,100.00	124,340.00
Ely Water Company.....	720,758.57	721,723.42	964.85	5,517.89	721,723.42	727,241.31
Esmeralda Water and Milling Company.....	99,997.00	99,997.00			99,997.00	99,997.00
Eureka Water Works.....	70,918.77	73,489.73		6,569.73	73,489.73	66,500.00
Goldfield Consolidated Water Company.....	1,355,505.52	1,295,172.53	2,570.96	6,319.62	1,295,172.53	1,301,492.45
Hawthorne Water Works.....	19,630.86	19,630.86			19,630.86	19,630.86
Indian Springs Water Company.....	199,546.56	199,593.21	46.65	20.98	199,593.21	199,614.19
Las Vegas Land and Water Company.....	16,042.07	16,023.07	19.00	2,088.96	16,023.07	18,112.03
Manhattan Water Company ^a	5,103.00	5,103.00		1,682.11	5,103.00	6,785.11
Manhattan Water Company ^b						
Mason Water, Light and Power Company.....	9,829.86	14,108.71	4,278.85	344.54	14,108.71	14,453.25
Reno Power, Light and Water Company.....	11,447.95	20,939.11	9,491.16	2,693.87	20,939.11	23,632.98
Ruby Hill Water Works.....	70,014.30	70,014.30			70,014.30	73,562.80
Tonopah Sewer and Drainage Company.....						
Virginia and Gold Hill Water Company ^d	10,000.00	10,000.00			10,000.00	10,000.00
Virginia Ranch Land and Cattle Company.....	2,388,327.10	1,681,848.27	13,430.43	8,334.03	2,401,757.53	1,690,182.30
Water Company of Tonopah.....	47,309.43	51,542.76	4,233.33	1,948.87	51,542.76	53,886.63
Winnemucca Water and Light Company.....	745,146.50	745,146.50			745,146.50	745,146.50
Wonder Water Company.....						
Totals	\$6,037,991.10	\$5,336,915.03	\$16,391.81	\$17,374.44	\$6,021,599.29	\$6,354,289.47

^aReport of owners of the plant.

^bReport of H. Z. Peters, lessee of the plant.

^cFormerly incorporated under the name of the Tonopah United Water Company.

^dNo report of cost of plant and equipment of the Virginia and Gold Hill Water Company, account records lost in San Francisco fire.

Italic figures denote reduction.

WATER COMPANIES
CAPITAL STOCK, AND FUNDED DEBT OUTSTANDING

Company	Total par value of capital stock outstanding		Total par value of all debt outstanding		Total par value of capital stock and debt outstanding	
	1912	1913	1912	1913	1912	1913
Austin Water Company	\$25,000.00	\$25,000.00			\$25,000.00	\$25,000.00
Carson Water Company	100,000.00	100,000.00			100,000.00	100,000.00
City of Fallon Water System						35,000.00
Elko Water and Light Corporation	150,000.00	150,000.00		\$35,000.00	150,000.00	150,000.00
Ely Water Company	500,000.00	500,000.00	\$255,000.00	255,000.00	755,000.00	755,000.00
Emeralda Water and Milling Company	100,000.00	100,000.00			100,000.00	100,000.00
Eureka Water Works						
Goldfield Consolidated Water Company	988,996.00	988,996.00	288,000.00	258,000.00	1,256,996.00	1,246,996.00
Hawthorne Water Works						
Indian Springs Water Company	200,000.00	200,000.00			200,000.00	200,000.00
Las Vegas Land and Water Company	50,000.00	50,000.00			50,000.00	50,000.00
Manhattan Water Company ^a						
Manhattan Water Company ^b						
Mason Water, Light and Power Company						
Reno Power, Light and Water Company	11,060.00	18,560.00	(c)	(c)	11,060.00	18,560.00
Ruby Hill Water Works						
Tonopah Sewer and Drainage Company	200,000.00	200,000.00	23,500.00	23,500.00	223,500.00	223,500.00
Virginia and Gold Hill Water Company	5,000,000.00	5,000,000.00			5,000,000.00	5,000,000.00
Virginia Ranch Land and Cattle Company						
Water Company of Tonopah ^d	2,000,000.00	1,000,000.00	200,000.00	728,000.00	2,200,000.00	1,728,000.00
Winnemucca Water and Light Company	100,000.00	100,000.00	30,000.00	30,000.00	130,000.00	130,000.00
Wonder Water Company	974,950.00	974,950.00			974,950.00	974,950.00
Totals	\$10,400,006.00	\$9,407,506.00	\$776,500.00	\$1,330,500.00	\$11,176,506.00	\$10,738,006.00

^aReport of owners of the plant.^bReport of H. Z. Peters, lessee of the plant.^cSee electric report.^dFormerly incorporated under the name of the Tonopah United Water Company.

WATER COMPANIES
NUMBER AND CLASSIFICATION OF CONSUMERS

Company	Commercial		Industrial		Public		Total consumers		Increase over preceding year		Decrease under preceding year	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
Austin Water Company	127	123	3	3	3	3	133	129			17	4
Carson Water Company	443	434	18	18	53	53	514	505			26	9
City of Fallon Water System	156	156			3	3	159	159		84		
Elko Water and Light Corporation	330	375	29	69	62	12	421	455	43	84		
Ely Water Company	409	448	15	8	24	24	448	480		32		
Esmeralda Water and Milling Company	5	5	1	1			6	6				
Eureka Water Works	56	46	2	2	21	21	79	69			1	10
Goldfield Consolidated Water Company	477	418	40	40	58	55	575	513	154		6	62
Hawthorne Water Works	59	50	4	2	9	9	72	61			1	11
Indian Springs Water Company	46	47	2	0	6	6	53	53				
Las Vegas Land and Water Company	307	332	4	4	3	4	314	340	19	26		
Manhattan Water Company ^a	183	191	0	0	6	8	189	199	51	10		
Mason Water, Light and Power Company	59	80	0	1	16	1	75	82	29	7		
Reno Power, Light and Water Company	2,721	2,943	43	46	26	26	2,790	3,015	384	225		
Ruby Hill Water Works	15	15	3	4	4	1	22	20			1	2
Tonopah Sewer and Drainage Company	172	165	0	11	0	1	172	183		11	9	
Virginia and Gold Hill Water Company	719	676	35	40	98	6	852	722			40	130
Virginia Ranch Land and Cattle Company	42	44	11	10	12	3	65	57				8
Water Company of Tonopah ^c	584	651	18	8	31	36	588	664	54	81		
Winnemucca Water and Light Company	315	344	25	29	17	17	357	390	86	33		
Wonder Water Company	24	24	0	0	1	3	25	27	6	2		
Totals	7,042	7,567	253	296	450	298	7,745	8,129	826	545	104	286

^aReport of owners of the plant.^bReport of H. Z. Peters, lessee of the plant.^cFormerly incorporated under the name of the Tonopah United Water Company.

ELECTRIC AND GAS UTILITIES
POPULATION OF TERRITORY SERVED, AND INCOME ACCOUNT

Company	Population of territory served		Total operating revenues		Total operating expenses	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	1,500	1,000	\$13,781.94	\$10,779.67	\$9,042.78	\$5,983.54
Consolidated Power and Telephone Company.....	2,000	1,500	28,443.55	16,036.10	21,137.55	11,306.41
Douglas Milling and Power Company ^b	3,200	2,000	41,928.25	360.00	30,752.55	1,375.00
Elko Water and Light Corporation.....	1,000	2,500	3,388.70	31,102.97	2,887.65	20,483.80
Ely Light and Power Company.....	300	500	43,048.73	42,787.39	2,887.65	32,492.14
Las Vegas Land and Water Company ^c	12,000	9,600	796,629.25	2,887.65	2,887.65	3,099.68
Lovelock Light and Power Company.....	1,200	1,200	48,638.25	182,018.77	2,887.65	3,231.88
The Nevada-California Power Company.....	13,500	13,500	176,302.92	182,018.77	2,887.65	262,886.34
Pacific Power Company.....	2,500	3,000	15,145.96	15,089.30	6,983.36	14,256.02
Reno Power, Light and Water Company.....	8,500	9,000	296,831.71	331,219.77	79,917.51	91,447.96
Southern Pacific Company (Carlin Plant).....	2,500	2,500	19,689.99	23,212.68	28,299.33	13,521.88
Steptoe Valley Smelting and Mining Company.....	1,200	1,200	3,957.15	6,888.90	3,980.00	5,790.00
The Truckee River General Electric Company.....	2,466	2,466	6,499.99	5,293.21	5,198.62	4,348.71
Winnemucca Water and Light Company.....	13,500	13,500	12,065.53	11,935.37	12,676.54	16,019.33
S. R. Young Electric Plant.....	65,366	66,516	42,054.80	43,042.45	31,539.31	28,861.43
Carson City Coal Gas Company.....						
Nevada Gas Company.....						
Reno Power, Light and Water Company.....						
Totals			\$1,507,406.72	\$1,741,266.71	\$468,206.58	\$615,575.37

^aIncludes \$2,277.04 earnings from telephone department, and operating expenses include \$1,182.13 chargeable to telephone department.

^bFor period February 1, 1913, to June 30, 1913, inclusive.

^cPlant sold to S. R. Young.

^dOperating revenues of electric department only.

^eOperating expenses of both water and light departments.

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Taxes		Total operating expenses and taxes		Net operating revenue or deficit	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	\$114.00	\$144.00	\$9,156.78	\$5,933.54		\$4,946.13
Consolidated Power and Telephone Company.....		74.10		11,450.41	\$4,625.16	\$4,585.09
Douglas Milling and Power Company ^b	222.70	341.00	21,360.25	1,449.10		1,099.10
Elko Water and Light Corporation.....	817.68	1,667.14	31,570.23	20,774.80	7,063.30	10,328.17
Ely Light and Power Company.....				34,149.28	10,368.02	8,638.11
Las Vegas Land and Water Company ^c				3,099.68		202.03
Lovelock Light and Power Company ^d	28.37		2,963.39		626.31	
Mason Water, Light and Power Company.....	442.21	43.20	*2,209.16	3,275.06	*639.57	1,534.70
The Nevada-California Power Company.....	21,000.00	16,500.00	167,033.48	279,386.34	639,695.77	667,709.64
Pacific Power Company.....	1,625.68	1,609.65	18,043.83	27,539.43	30,594.42	39,224.44
Reno Power, Light and Water Company.....	11,618.20	6,635.05	82,951.63	50,077.32	92,311.29	101,941.45
Southern Pacific Company (Carlin Plant).....		595.72	6,933.36	14,851.74	8,212.60	268.15
Stephens Valley Smelting and Mining Company.....		15,102.73	91,806.46	106,550.69	206,025.26	157.06
The Truckee River General Electric Company.....	11,888.94		28,672.21	14,279.40	3,992.22	224,669.08
Winnemucca Water and Light Company.....	372.88	758.02	3,960.00	5,730.00		8,953.28
S. R. Young Electric Plant.....					22.35	163.90
Carson City Coal Gas Company.....	713.20	408.00	5,911.82	4,754.71	588.17	538.50
Nevada Gas Company.....	366.76	337.82	12,941.30	15,404.96	272.77	5,021.58
Reno Power, Light and Water Company.....	(f)	1,106.84	31,539.31	23,967.27	10,515.49	13,076.18
Totals.....	\$48,807.62	\$45,360.07	\$507,013.20	\$660,935.44	\$1,000,393.52	\$1,080,331.27

^aIncludes net earnings of telephone department.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cPlant sold to S. R. Young.^dIncludes both electric and water departments.^eElectric department only.^fTaxes of all departments, water, gas and electric.^gSee electric report.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES

INCOME ACCOUNT

Company	Nonoperating revenues		Gross corporate income or deficit		Interest on funded debt	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	\$131.07	\$124.53	\$4,756.23	\$4,846.13	-----	\$1,131.30
Consolidated Power and Telephone Company.....	-----	-----	-----	\$4,710.22	-----	-----
Douglas Milling and Power Company ^b	-----	-----	-----	1,069.10	-----	-----
Elko Water and Light Corporation.....	-----	-----	7,083.30	10,328.17	-----	-----
Ely Light and Power Company.....	20.66	224.24	10,337.36	8,862.35	-----	-----
Las Vegas Land and Water Company.....	-----	-----	-----	202.03	-----	-----
Lovelock Light and Power Company.....	379.23	-----	904.54	-----	-----	-----
Mason Water, Light and Power Company.....	-----	-----	d1,711.01	1,534.70	-----	-----
The Nevada-California Power Company.....	22,729.37	65,725.04	662,825.14	733,434.68	\$167,759.30	167,110.50
Pacific Power Company.....	131.47	250.34	30,725.89	39,474.78	48,000.00	48,000.00
Reno Power, Light and Water Company.....	*83,040.96	*90,760.86	175,352.25	182,702.31	45,000.00	45,000.00
Southern Pacific Company (Carlin Plant).....	-----	-----	-----	268.15	-----	-----
Steptoe Valley Smelting and Mining Company.....	145.71	110.82	8,358.31	298.38	-----	-----
The Truckee River General Electric Company.....	681.86	236.91	\$206,237.28	b225,816.81	-----	-----
Winnemucca Water and Light Company.....	233.10	35.00	8,749.12	8,968.28	-----	-----
S. R. Young Electric Plant.....	-----	-----	22.55	163.90	1,800.00	1,802.30
Carson City Coal Gas Company.....	-----	-----	588.17	538.50	-----	-----
Nevada Gas Company.....	108.59	-----	767.18	5,021.53	-----	-----
Reno Power, Light and Water Company.....	288.92	211.64	10,784.41	13,296.82	6,422.50	6,205.68
Totals.....	\$107,829.62	\$147,679.38	\$1,108,624.10	\$1,228,920.47	\$263,981.80	\$269,250.78

^aIncludes net earnings of telephone department.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cPlant sold to S. R. Young.^dIncludes both electric and water departments.^eRepresents \$14,339.77 nonoperating revenues, and \$68,701.19 net earnings of water and gas departments.^fRepresents \$7,727.22 nonoperating revenues, and \$73,033.64 net earnings of water and gas departments.^g\$469.84 deducted on account of loss in operation of water company in California.^h\$909.82 added on account of earnings in operation of water company in California.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Other deductions from gross corporate income		Net corporate income or deficit		Dividends declared	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	\$342.50	\$1,770.00	\$3,813.75	\$3,714.83		
Consolidated Power and Telephone Company.....				2,940.22		
Douglas Milling and Power Company ^d				1,089.10		
Elko Water and Light Corporation.....	\$90.00	\$220.00	6,123.30	10,008.17	\$4,400.00	\$4,800.00
Ely Light and Power Company.....	\$1,810.22	\$5,461.23	8,527.14	8,401.12		
Las Vegas Land and Water Company ^d				\$28.03		
Lovelock Light and Power Company ^d	\$100.00		804.54			
Mason Water, Light and Power Company.....	\$657.37	\$284.66	1,053.64	1,250.04		
The Nevada-California Power Company.....	\$164,128.73	\$234,613.06	\$30,437.11	381,711.12	182,660.00	182,660.00
Pacific Power Company.....	114.56	1152.80	17,233.67	8,673.02		
Reno Power, Light and Water Company.....	\$22,601.31	\$22,997.69	107,750.94	114,704.62	80,000.00	45,000.00
Southern Pacific Company (Carlin Plant).....				288.15		
Steptoe Valley Smelting and Mining Company.....			8,358.31	298.38		
The Truckee River General Electric Company.....		\$59,470.79	130,803.05	136,345.02	157,500.00	112,500.00
Winnemucca Water and Light Company.....	\$74,434.23	\$1,203.73	10,519.12	5,952.25		
S. R. Young Plant.....			\$2.85	183.90		
Carson City Coal Gas Company.....	\$802.85	\$978.15	\$14.68	437.65		
Nevada Gas Company.....	\$1,478.63	\$10,025.40	8,668.31	21,253.66		
Reno Power, Light and Water Company.....			(p)	(p)		
Totals.....	\$287,980.40	\$367,275.51	\$580,928.13	\$579,107.36	\$424,560.00	\$344,960.00

^aInterest on floating debt.^bInterest on real estate mortgages, interest on floating debt, \$969.76; miscellaneous, \$4,491.47.^cSold to S. R. Young.^dInterest on floating debt, \$407.37; miscellaneous, \$250.^eFor period February 1, 1913, to June 30, 1913, inclusive.^fInterest on floating debt and sundry interest, \$10,383.33; contractual sinking fund, \$81,811.75; miscellaneous, \$71,933.40.^gDepreciation of plant and equipment, \$123,355.16; interest on floating debt, \$2,686.56.^hNet earnings transferred to electric account.ⁱInterest on deposits.^jInterest on floating debt, \$1,101.31; contractual sinking fund, \$9,000; miscellaneous, \$12,600.^kInterest on floating debt, \$1,272.69; contractual sinking fund, \$9,225; Washoe company rentals, \$12,600.^lInterest on floating debt, \$43,434.23; replacement reserve, \$31,000.^mInterest.ⁿBad accounts.^oDepreciation, \$3,600; miscellaneous, \$6,425.40.^pNet earnings transferred to electric account.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Other deductions from net corporate income		Surplus or deficit for year		Total surplus or deficit at close of year	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System				\$3,714.83		\$3,606.88
Consolidated Power and Telephone Company				2,940.22		2,940.22
Douglas Milling and Power Company ^b	\$4,865.10		\$1,151.37	5,089.10		1,089.10
Elko Water and Light Corporation			1,723.30	5,208.17		
Ely Light and Power Company			8,827.14	3,401.12	\$36,133.42	39,534.54
Las Vegas Land and Water Company				202.06		202.06
Las Vegas Light and Power Company	345.50		453.95	1,250.04	553.59	
Masonville Light and Power Company			1,058.64	1,058.64	2,159.65	1,487.09
The Nevada Light and Power Company			147,777.11	149,051.12	1,005,914.30	1,158,598.51
The Nevada California Power Company			17,933.47	8,473.02	44,373.61	58,751.63
Pacific Power Company			8,750.94	65,145.62	394,410.12	459,555.74
Reno Power, Light and Water Company	24,000.00	\$4,559.00		268.15		
Southern Valley Smelting and Mining Company			8,358.31	298.38		
The Truckee River General Mining Company			24,493.95	23,845.02	518,216.73	542,081.75
Winnemucca Water and Electric Company			10,519.12	5,982.25	8,719.12	5,509.43
S. R. Young Electric Plant			22.55	163.90	22.55	141.05
Carson City Coal Gas Company				437.65	90.55	523.20
Nevada Gas Company			8,663.31	\$1,253.66	44,723.57	66,313.73
Reno Power, Light and Water Company						
Totals	\$29,310.60	\$4,559.00	\$107,057.44	\$229,588.36	\$1,869,182.53	\$2,081,531.67

^a Payments on loans and plant.^b For period February 1, 1913, to June 30, 1913, inclusive.^c Sold to S. R. Young.^d Replacement reserve.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Power expense		Transmission and transfor- mation expenses ^a		Distribution expense ^b	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System		\$4,175.48				\$66.50
Consolidated Power and Telephone Company	\$2,843.13	6,844.63				
Douglas Milling and Power Company ^c	12,154.44	11,906.01			\$2,298.63	
Elko Water and Light Corporation	19,198.19	20,670.71			8,141.13	2,925.68
Ely Light and Power Company		3,067.30				12.38
Las Vegas Land and Water Company ^d	2,415.52					
Lovelock Light and Power Company ^d	1,398.52	1,968.00			768.43	
Mason Water, Light and Power Company	35,635.48	137,256.61	\$25,798.07	\$29,490.90	27,576.81	18,263.77
The Nevada-California Power Company	6,274.61	14,257.60	7,263.11	7,091.56	1,289.31	1,289.31
Pacific Power Company	28,955.43	32,159.78	2,807.57	2,879.01	11,421.00	10,320.69
Reno Power, Light and Water Company		1,199.70				
Southern Pacific Company (Carlin Plant)	4,150.53	4,523.29			2,762.83	5,762.87
Steptoe Valley Smelting and Mining Company	29,866.25	36,180.33			11,312.34	9,886.98
The Truckee River General Electric Company	16,464.64	9,625.26	7,673.43	11,012.12	9,656.35	1,216.35
Winnemucca Water and Light Company	750.00	630.00	80.00	300.00		
S. R. Young Electric Plant						
Carson City Coal Gas Company			3,620.52	3,068.15	292.95	304.71
Nevada Gas Company			7,692.75	10,208.70	3,664.20	3,949.80
Reno Power, Light and Water Company			14,971.65	15,231.44	9,066.71	6,762.22
Totals	\$180,156.74	\$284,877.09	\$69,907.10	\$79,281.88	\$82,959.48	\$60,781.26

^aProduction expenses shown in this column for gas companies.^bGas companies; same item of expense as for electric companies.^cFor period February 1, 1913, to June 30, 1913, inclusive.^dSold to S. R. Young.

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Consumption expenses ^a		Commercial expense		General expense	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System		\$136.89				\$1,550.28
Consolidated Power and Telephone Company			\$2,962.72		\$3,236.93	4,461.78
Douglas Milling and Power Company ^b				\$22.50		860.00
Elko Water and Light Corporation	\$2,388.44	1,128.63		2,287.88	4,041.04	5,131.23
Ely Light and Power Company	789.92	848.80			6,958.38	8,199.56
Las Vegas Land and Water Company ^c						
Lovelock Light and Power Company ^d	15.00		378.00		28.50	
Mason Water, Light and Power Company		6813.39		\$34.20		516.29
The Nevada-California Power Company	269.91	1,380.98	4,019.69	11,821.59	30,688.52	57,987.81
Pacific Power Company					1,902.43	3,351.31
Southern Pacific Company (Carlin Plant)			2,000.00	2,370.60	21,764.84	21,810.43
Steptoe Valley Smelting and Mining Company						
The Truckee River General Electric Company						
Winnemucca Water and Light Company	1,770.66	1,973.27	1,500.00	3,775.24	21,989.34	3,949.87
S. R. Young Electric Plant	162.19	548.10	480.00	522.06	1,297.16	26,941.44
			100.00		50.00	4,800.00
Carson City Coal Gas Company			124.96	54.22	995.83	751.79
Nevada Gas Company	670.63	674.31			380.00	1,067.23
Reno Power, Light and Water Company			1,778.83	2,470.08	5,571.54	4,156.67
Totals	\$8,938.67	\$9,465.27	\$13,344.20	\$23,338.36	\$98,799.51	\$146,016.42

^aExpenses for municipal contract lighting, gas companies, are shown in this column.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cSold to S. R. Young.^dLabor expenses.^eInsurance.

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Undistributed expenses		Total operating expenses		Ratio of operating expenses to earnings—Per cent	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....		\$4.39		\$5,933.54		55.04
Consolidated Power and Telephone Company.....			\$9,042.78	11,396.41	65.61	70.50
Douglas Milling and Power Company ^a				1,375.00		381.94
Elko Water and Light Corporation.....	\$255.00		21,137.55	20,433.80	74.31	65.70
Ely Light and Power Company.....	714.88	347.39	30,762.55	32,492.14	73.75	75.94
Las Vegas Land and Water Company.....				8,099.68		106.97
Lovelock Light and Power Company ^b			2,337.02		88.72	
Mason Water, Light and Power Company.....			2,166.95	3,231.88	71.08	87.19
The Nevada-California Power Company.....	12,000.00	6,704.78	136,033.45	262,886.34	17.08	27.76
Pacific Power Company.....			16,418.15	25,989.78	33.76	38.89
Reno Power, Light and Water Company.....	1,502.87	1,440.86	71,373.43	73,442.27	40.71	40.35
Southern Pacific Company (Carlin Plant).....				1,199.70		81.73
Steptoe Valley Smelting and Mining Company.....			6,933.36	14,256.02	45.78	94.79
The Truckee River General Electric Company.....	5,355.49	1,698.58	79,917.51	91,447.96	26.92	27.61
Winnemucca Water and Light Company.....	238.99	1,107.94	23,299.33	13,621.38	145.62	58.25
S. R. Young Electric Plant.....	8,000.00		3,960.00	6,730.00	100.58	97.22
Carson City Coal Gas Company.....	164.35	169.84	5,186.62	4,348.71	79.98	82.16
Nevada Gas Company.....	25.88	129.29	12,393.53	16,019.33	104.23	140.70
Reno Power, Light and Water Company.....	150.58	212.02	31,539.31	23,861.43	75.00	67.05
Totals	\$23,907.87	\$11,815.09	\$459,013.57	\$615,575.37	30.40	33.35

^aFor period February 1, 1913, to June 30, 1913, inclusive.^bSold to S. R. Young.

ELECTRIC AND GAS UTILITIES
TOTAL COST OF PLANT AND EQUIPMENT

Company	Cost at beginning of year		Additions during year		Cost at close of year	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	\$19,042.24	\$15,000.00	\$1,377.39	\$2,606.75	\$20,419.63	\$17,606.75
Consolidated Power and Telephone Company.....	43,150.00	45,715.00	2,565.00	1,906.75	45,715.00	22,326.38
Douglas Milling and Power Company ^a	241,112.36	244,710.85	3,598.49	2,690.42	244,710.85	16,960.94
Elko Water and Light Corporation.....	6,014.20	68.95	228.00	1,906.09	6,242.20	46,100.00
Ely Light and Power Company.....	2,577.86	8,477.80	889.74	594.61	3,467.60	242,020.43
Las Vegas Land and Water Company ^b	8,378,746.59	8,478,448.38	99,701.79	75,243.09	8,478,448.38	1,972.04
Lovelock Light and Power Company.....	1,678,778.47	1,841,554.15	162,775.68	128,594.01	1,841,554.15	
Mason Water, Light and Power Company.....	2,021,319.95	2,023,479.64	2,159.69	43,092.51	2,023,479.64	
The Nevada-California Power Company.....	3,852,158.12	10,455,571.33	6,603,413.21	95,181.35	10,455,571.33	4,072.21
Pacific Power Company.....	80,120.42	92,246.60	62,126.18	9,168.33	92,246.60	8,403,200.29
Reno Power, Light and Water Company.....	35,203.67	42,703.67	7,500.00	4,931.00	42,703.67	1,968,148.16
Southern Pacific Company (Carlin Plant).....	58,385.89	58,648.23	282.34	554.60	58,648.23	1,976,381.13
Steptoe Valley Smelting and Mining Company.....	253,087.75	252,393.61	644.14	2,992.28	252,393.61	
The Truckee River General Electric Company.....	5,819.83	11,004.89	5,185.06	2,071.13	11,004.89	
Winnemucca Water and Light Company.....						
S. R. Young Electric Plant.....						
Carson City Coal Gas Company.....						
Nevada Gas Company.....						
Reno Power, Light and Water Company.....						
Totals	\$16,626,467.35	\$23,586,437.63	\$6,951,148.43	\$122,856.88	\$23,576,616.78	\$23,726,256.35

^aFor period February 1, 1913, to June 30, 1913, inclusive.

^bSold to S. R. Young.

Italic figures denote reduction.

ELECTRIC AND GAS UTILITIES
CAPITAL STOCK, AND FUNDED DEBT OUTSTANDING

Company	Total par value of capital stock outstanding		Total par value of all debt outstanding		Total par value of capital stock and debt outstanding	
	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	\$100,000.00	\$100,000.00		\$15,000.00	\$116,500.00	\$115,000.00
Consolidated Power and Telephone Company.....		27,500.00				150,000.00
Douglas Milling and Power Company.....	150,000.00	150,000.00			150,000.00	150,000.00
Elko Water and Light Corporation ^a	200,000.00	200,000.00			200,000.00	200,000.00
Ely Light and Power Company.....		50,000.00				50,000.00
Las Vegas Land and Water Company ^a	13,000.00		1,000.00		14,000.00	
Lovelock Light and Power Company ^b	11,000.00	13,560.00			11,000.00	13,560.00
Mason Water, Light and Power Company ^a	5,000,000.00	5,000,000.00	2,818,000.00	2,734,000.00	7,818,000.00	7,734,000.00
The Nevada-California Power Company.....	800,033.00	800,033.00	800,000.00		1,600,033.00	1,600,033.00
Pacific Power Company.....	1,000,000.00	1,000,000.00	750,000.00	750,000.00	1,750,000.00	1,750,000.00
Reno Power, Light and Water Company ^c						
Southern Pacific Company (Carlin Plant).....	3,000,000.00	3,000,000.00			3,000,000.00	3,000,000.00
Stephens Valley Smelting and Mining Company ^d	100,000.00	100,000.00	30,000.00	30,000.00	130,000.00	130,000.00
The Truckee River General Electric Company.....						
Winemucca Water and Light Company ^a						
S. R. Young Electric Plant.....						
Carson City Coal Gas Company.....						
Nevada Gas Company.....	50,000.00	50,000.00			50,000.00	50,000.00
Reno Power, Light and Water Company ^e	150,000.00	150,000.00			150,000.00	150,000.00
Totals	\$10,574,033.00	\$10,646,033.00	\$4,415,500.00	\$4,379,000.00	\$14,989,533.00	\$15,025,033.00

^aIncludes capital account of both water and light departments.

^bSold to S. R. Young.

^cIncludes capital account of electric, water, and gas departments.

^dElectric-light plant is operated as a part of the smelting company's plant.

^eSee electric report of this company.

ELECTRIC AND GAS UTILITIES
COMMERCIAL CONSUMERS, AND POWER GENERATED

Company	Total number of lighting consumers		Total number of power consumers		Total number of consumers		Number of consumers on meter basis		Total number of KWH generated by all methods ^a	
	1912	1913	1912	1913	1912	1913	1912	1913	1912	1913
City of Fallon Electric System.....	145	282	0	8	145	280	88	290	---	b111,113
Consolidated Power and Telephone Company.....	183	183	0	0	183	183	101	101	---	---
Douglas Milling and Power Company.....	59	59	21	21	59	80	80	80	---	---
Elko Water and Light Corporation.....	352	352	10	5	343	357	267	357	244,748	270,403
Ely Light and Power Company.....	661	661	21	26	618	687	615	684	383,890	375,048
Las Vegas Land and Water Company.....	66	66	1	1	66	66	4	2	---	---
Lovelock Light and Power Company.....	47	150	0	6	47	156	21	35	37,084	84,160
Mason Water, Light and Power Company.....	96	150	4	80	102	2,550	21	35	69,066	---
The Nevada-California Power Company.....	3,239	2,470	118	5	3,357	2,560	3,357	2,560	59,183,900	68,315,238
Pacific Power Company.....	36	52	5	4	41	56	3	9	5,013,100	5,952,704
Reno Power, Light and Water Company.....	---	---	---	---	3,500	2,982	2,831	2,585	12,597,695	10,069,200
Southern Pacific Company (Carlin Plant).....	---	---	---	---	---	---	---	---	---	---
Steptoe Valley Smelting and Mining Company.....	432	438	---	---	432	438	0	0	366,429	389,607
The Truckee River General Electric Company.....	---	---	---	---	1,565	1,611	1,068	1,218	25,481,865	32,152,870
Winnemucca Water and Light Company.....	271	312	0	1	271	313	61	313	---	---
S. R. Young Electric Plant.....	30	98	0	0	30	98	4	42	---	---
Carson City Coal Gas Company.....	---	---	---	---	---	---	---	---	3,350,700	2,727,700
Nevada Gas Company.....	---	---	---	---	212	214	212	214	---	---
Reno Power, Light and Water Company.....	---	---	---	---	362	271	362	362	---	---
---	---	---	---	---	1,394	1,503	1,394	1,503	28,064,700	31,069,900
Totals.....	5,228	5,122	158	162	12,328	11,946	10,186	10,345	{ *108,377,717 } *1,405,400	{ *108,055,563 } *142,681,300

^aFigures for gas companies shown in this column are the number of cubic feet of gas produced.^bPower purchased.^cFor period February 1, 1913, to June 30, 1913, inclusive.^dSold to S. R. Young.^eElectric KWH. ^fCubic feet of gas.

DIRECTORS AND OFFICERS OF WATER, GAS, AND ELECTRIC UTILITIES

WATER COMPANIES

Austin Water Company

Directors—Emma M. Farnsworth, Louis H. Farnsworth, Louis D. Farnsworth, Herbert M. Chamberlain, T. Ellis Browne, all of Salt Lake City, Utah.

Officers—President, Emma M. Farnsworth; Vice-President, Louis H. Farnsworth; Secretary, Louis D. Farnsworth; Treasurer, Louis D. Farnsworth, all of Salt Lake City, Utah.

Carson Water Company

Directors—Clara V. Yerington, San Francisco, Cal.; H. H. Yerington, San Francisco, Cal.; E. B. Yerington, Carson City, Nevada.

Officers—President, Clara V. Yerington, San Francisco, Cal.; Vice-President, H. H. Yerington, San Francisco, Cal.; Secretary and Treasurer, E. B. Yerington, Carson City, Nevada; Superintendent, F. A. Cushing, Carson City, Nevada.

City of Fallon Water System

Directors—Geo. E. Sherman, John Oats, J. O. Jones, Jae Jarvis, L. W. Crehore, W. H. Reavis, City Officials, Fallon, Nevada.

Officers—Mayor, Geo. E. Sherman; Secretary, W. H. Reavis; Treasurer, John P. Schnider; City Engineer and Superintendent, L. W. Crehore.

Elko Water and Light Corporation

Directors—Chas. B. Henderson, Ethel S. Henderson, John Henderson, W. T. Smith, all of Elko, Nevada.

Officers—President, W. T. Smith; Vice-President and Secretary, Chas. B. Henderson; Treasurer, John Henderson.

Ely Water Company

Directors—Frank W. Holmes, Mt. Vernon, N. Y.; H. A. Gray, New York, N. Y.; H. E. Dodge, Henry F. J. Knobloch, Bayonne, N. J.; David E. Thomas, Bayonne, N. J.

Officers—President, Frank W. Holmes, Mt. Vernon, N. Y.; Vice-President, H. A. Gray, New York, N. Y.; Secretary, Henry F. J. Knobloch, Bayonne, N. J.; Treasurer, H. E. Dodge.

The Esmeralda Water and Milling Company

Directors—Frederic L. Sherwin, Warren F. Sears, Edward A. Rosenfeld, all of Colorado Springs Colo.

Officers—President, Frederic L. Sherwin; Vice-President, Warren F. Sears; Secretary, Edward A. Rosenfeld; Treasurer, Warren F. Sears, all of Colorado Springs, Colo.

Eureka Water Works

Directors—None. Private property. Sole ownership.

Superintendent, M. M. Fletcher, Eureka, Nevada.

The Goldfield Consolidated Water Company

Directors—T. B. Rickey, Berkeley, Cal.; L. B. Curtis, Provo, Utah; F. M. Ish, Oakland, Cal.; Harry C. Davis, Denver, Colo.; Chas. G. Patrick, Goldfield, Nevada.

Officers—President, T. B. Rickey, Berkeley, Cal.; Vice-President, L. B. Curtis, Provo, Utah; Secretary and Treasurer, Chas. G. Patrick, Goldfield, Nevada.

Hawthorne Water Works

Directors—Jno. F. Cannon, San Francisco, Cal.; Geo. T. Mills, E. B. Yerington, A. M. Ardery, F. E. Murphy, all of Carson City, Nevada.

Officers—President, Jno. F. Cannon, San Francisco, Cal.; Vice-President, Geo. T. Mills, Carson City, Nevada; Secretary and Treasurer, E. B. Yerington, Carson City, Nevada; Superintendent, G. B. Stannard, Hawthorne, Nevada.

Indian Springs Water Company

Directors—J. C. Brittain, Piedmont, Cal.; G. H. Brittain, Piedmont, Cal.; F. M. Butler, Oakland, Cal.; F. A. Koetitz, San Francisco, Cal.; F. J. Busch, Rhyolite, Nevada.

Officers—President, J. C. Brittain, Piedmont, Cal.; Vice-President, F. A. Koetitz, San Francisco, Cal.; Secretary and Treasurer, F. M. Butler, Oakland, Cal.

Las Vegas Land and Water Company

Directors—W. H. Bancroft, Salt Lake City, Utah; J. Ross Clark, H. C. Nutt, W. H. Comstock, H. I. Bettis, all of Los Angeles, Cal.

Officers—President, H. C. Nutt; Vice-President, H. I. Bettis; Secretary, W. H. Comstock; Treasurer, W. H. Leete, all of Los Angeles, Cal.

Manhattan Water Company

Directors—None.

Owners—Joseph E. Connor and M. E. Wilson, Manhattan, Nevada.

Mason Water, Light and Power Company

Directors—W. W. Armstrong and B. L. Cripps, of Salt Lake City, Utah; H. W. Culbertson, Mason, Nevada.

Officers—President, W. W. Armstrong, Salt Lake City, Utah; Vice-President, B. L. Cripps, Salt Lake City, Utah; Secretary and Treasurer, H. W. Culbertson, Mason, Nevada.

Reno Power, Light and Water Company

Directors—R. K. Barrows, A. E. Boynton, Hugh Goodfellow, A. G. Hill, Chas. W. Gardner, A. L. Dahl, Chas. H. Hammon, all of San Francisco, Cal.

Officers—President, Chas. W. Gardner; Vice-President, Chas. H. Hammon; Secretary, A. L. Dahl, all of San Francisco, Cal.; Manager, Geo. A. Campbell, Reno, Nevada; Treasurer, Henry B. Sawyer, Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada.

Ruby Hill Water Works

Directors—None. Operated by the Eureka Land and Stock Company of Eureka, Nevada.

Officers—President, Isadore Sara, Eureka, Nevada; Vice-President, Pedro Urquiza, Eureka, Nevada; Secretary, A. C. Kimball, Elko, Nevada; Treasurer, B. C. Turrittin, Reno, Nevada.

Tonopah Sewer and Drainage Company

Directors—J. G. Crumley, L. L. Crumley, Newton Crumley, W. W. Booth, all of Tonopah, Nevada; K. J. Booth, Reno, Nevada; N. L. Schade, Tonopah, Nevada.

Officers—President and General Manager, J. G. Crumley, Tonopah, Nevada; Vice-President, K. J. Booth, Reno, Nevada; Secretary and Treasurer, N. L. Schade, Tonopah, Nevada.

Virginia and Gold Hill Water Company

Directors—W. E. Dean, E. J. McCutchen, J. E. Walsh, W. S. Hobart, W. L. Dean, all of San Francisco, Cal.; Chas. H. Fish, D. C. Bates, of San Rafael, Cal.

Officers—President, W. E. Dean, San Francisco, Cal.; Vice-President, E. J. McCutchen, San Francisco, Cal.; Secretary, D. C. Bates, San Rafael, Cal.; Treasurer, Wells-Fargo Nevada National Bank, San Francisco, Cal.

Virginia Ranch Land and Cattle Company

Directors—Not given.

Officers—President, H. C. Dangberg, Gardnerville, Nevada; Vice-President, M. J. Dangberg, Gardnerville, Nevada; Secretary, Bertha D. Cardinal, Minden, Nevada; Treasurer, Wm. Dangberg, Minden, Nevada.

Water Company of Tonopah

Directors—Van Horn Ely, Pittsburg, Pa.; B. N. Busch, New York, N. Y.; E. G. Wheeler, New York, N. Y.; Ralph C. Lupton, Wilmington, Del.; C. B. Zabriskie, New York, N. Y.

Officers—President, Van Horn Ely, Pittsburg, Pa.; Vice-President, E. G. Wheeler, New York, N. Y.; Secretary, H. F. MacNamara, New York, N. Y.; Treasurer, B. N. Busch, New York, N. Y.

Winnemucca Water and Light Company

Directors—Edw. Reinhart, Moses Reinhart, of Winnemucca, Nevada; Leopold Michels, M. J. Brandenstein, M. Willard, all of San Francisco, Cal.

Officers—President, Leopold Michels, San Francisco, Cal.; Vice-President, M. Willard, San Francisco, Cal.; Secretary, Edw. Reinhart, Winnemucca, Nevada; Treasurer, Moses Reinhart, Winnemucca, Nevada.

Wonder Water Company

Directors—Wm. Matson, Harry B. Gregg, R. H. Wright, F. S. Samuels, all of San Francisco, Cal.; E. S. Cunningham, Wonder, Nevada.

Officers—President, Wm. Matson; Vice-President, F. S. Samuels; Secretary and Treasurer, Harry B. Gregg.

ELECTRIC COMPANIES

City of Fallon Electric System

Directors—Geo. E. Sherman, John Oats, J. O. Jones, Jae Jarvis, W. H. Reavis, L. W. Crehore, City Officials, all of Fallon, Nevada.

Officers—Not shown.

Consolidated Power and Telephone Company

Directors—F. A. Clark, E. W. Clark, John S. Park, W. S. Park, all of Las Vegas, Nevada.

Officers—President, F. A. Clark; Vice-President, E. W. Clark; Secretary and Treasurer, John S. Park; Manager, W. S. Park.

Douglas Milling and Power Company

Directors—F. W. Sarman, Wm. Graunke, L. N. Anderson, J. N. Anderson, all of Gardnerville, Nevada; Al. Karge, Carson City, Nevada.

Officers—President, F. W. Sarman; Vice-President, Wm. Graunke; Secretary, L. N. Anderson; Treasurer, J. N. Anderson, all of Gardnerville, Nevada.

Elko Water and Light Corporation

Directors—Chas. B. Henderson, Ethel S. Henderson, John Henderson, W. T. Smith, all of Elko, Nevada.

Officers—President, W. T. Smith; Vice-President and Secretary, Chas. B. Henderson; Treasurer, John Henderson.

Ely Light and Power Company

Directors—Frank W. Holmes, Mount Vernon, N. Y.; H. A. Gray, New York, N. Y.; Arthur Smith, East Ely, Nevada; H. E. Dodge, Henry F. J. Knobloch, Bayonne, N. J.

Officers—President, Frank W. Holmes, Mount Vernon, N. Y.; Vice-President, H. A. Gray, New York, N. Y.; Secretary and Assistant Treasurer, Henry F. J. Knobloch, Bayonne, N. J.; Second Vice-President, Arthur Smith, East Ely, Nevada; Treasurer, H. E. Dodge.

Las Vegas Land and Water Company

Directors—W. H. Baneroff, Salt Lake City, Utah; J. Ross Clark, H. C. Nutt, W. H. Comstock, H. I. Bettis, all of Los Angeles, Cal.

Officers—President, H. C. Nutt; Vice-President, H. I. Bettis; Secretary, W. H. Comstock; Treasurer, W. H. Leete, all of Los Angeles, Cal.

Mason Water, Light and Power Company

Directors—W. W. Armstrong, B. L. Cripps, Salt Lake City, Utah; H. W. Culbertson, Mason, Nevada.

Officers—President, W. W. Armstrong, Salt Lake City, Utah; Vice-President, B. L. Cripps, Salt Lake City, Utah; Secretary and Treasurer, H. W. Culbertson, Mason, Nevada.

The Nevada-California Power Company

Directors—Delos A. Chappell, Riverside, Cal.; Rodney Curtis, Denver, Colo.; Arthur B. West, Riverside, Cal.; Lawrence C. Phipps, Denver, Colo.; G. S. Wood, Lawrence C. Phipps, Jr., W. E. Porter, all of Denver, Colo.

Officers—President, Delos A. Chappell, Riverside, Cal.; Vice-Presidents, Arthur B. West, Riverside, Cal.; Rodney Curtis, G. S. Wood, of Denver, Colo.; Treasurer, Lawrence C. Phipps, Jr., Denver, Colo.; Assistant Treasurer, A. S. Cooper, Riverside, Cal.; Secretary, W. E. Porter, Denver, Colo.; Auditor, P. R. Ferguson, Riverside, Cal.

Pacific Power Company

Directors—Delos A. Chappell, Riverside, Cal.; A. E. Anderson, W. A. Doble, of San Francisco, Cal.

Officers—President, Delos A. Chappell, Riverside, Cal.; Vice-President, A. E. Anderson, San Francisco, Cal.; Secretary and Treasurer, Floyd Shank, San Francisco, Cal.; Assistant Secretary, Treasurer and Manager, W. M. Chatfield, Bodie, Cal.

Reno Power, Light and Water Company

Directors—R. K. Barrows, A. E. Boynton, Hugh Goodfellow, A. G. Hill, Chas. W. Gardner, A. L. Dahl, Chas. H. Hammon, all of San Francisco, Cal.

Officers—President, Chas. W. Gardner; Vice-President, Chas. H. Hammon; Secretary, A. L. Dahl, all of San Francisco, Cal.; Treasurer, Henry B. Sawyer, Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada; Manager, Geo. A. Campbell, Reno, Nevada.

Southern Pacific Company (Carlin, Nevada)

Directors and Officers—Same as Southern Pacific Company, given in railroad report.

Step toe Valley Smelting and Mining Company

Directors—S. W. Eccles, S. R. Guggenheim, Murray Guggenheim, W. E. Bennett, W. B. Thompson, J. N. Steele, all of New York, N. Y.; D. C. Jackling, Salt Lake City, Utah; Charles Hayden, Boston, Mass.; W. Hinckle Smith, Philadelphia, Pa.; Judd Stewart, New York, N. Y.; C. M. McNeill, Colorado Springs, Colo.

Officers—President, S. W. Eccles, New York, N. Y.; Vice-President, D. C. Jackling, Salt Lake City, Utah; Secretary, W. E. Bennett, New York, N. Y.; Treasurer, Chas. K. Lipman, New York, N. Y.

The Truckee River General Electric Company

Directors—Chester M. Clark, William T. Crawford, Ernest I. Doe, Clement R. Ford, Alvah K. Todd, Charles F. Wallace, Guy L. Weymouth, all of Boston, Mass.

Officers—President, Guy L. Weymouth; Vice-President, William T. Crawford; Secretary, Alvah K. Todd; Treasurer, Henry B. Sawyer; Assistant Treasurer, J. F. G. Nichols, all of Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada; Manager, Geo. A. Campbell, Reno, Nevada; Clerk, Wadleigh B. Drummond, Portland, Me.

Winnemucca Water and Light Company

Directors—Edward Reinhart, Moses Reinhart, of Winnemucca, Nevada; Leopold Michels, M. J. Brandenstein, M. Willard, of San Francisco, Cal.

Officers—President, Leopold Michels; Vice-President, M. Willard, of San Francisco, Cal.; Secretary, Edward Reinhart; Treasurer, Moses Reinhart, Winnemucca, Nevada.

S. R. Young Electric Plant

Directors—None. S. R. Young, Owner, Lovelock, Nevada.

GAS COMPANIES

Carson City Coal Gas Company

Directors—Chas. W. Gardner, San Francisco, Cal.; H. A. Lemmon, Reno, Nevada; O. W. Tennant, Carson City, Nevada.

Officers—President, Chas. W. Gardner, San Francisco, Cal.; Vice-President, H. A. Lemmon, Reno, Nevada; Secretary, A. E. Boynton, San Francisco, Cal.; Manager, Geo. A. Campbell, Reno, Nevada; Treasurer, Henry B. Sawyer, Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada.

Nevada Gas Company

Directors—John Martin, Ross, Cal.; J. D. Grant, L. P. Lowe, of San Francisco, Cal.

Officers—President, John Martin, Ross, Cal.; Vice-President, L. P. Lowe; Secretary, L. W. Pryor; Treasurer and General Manager, L. P. Lowe, all of San Francisco, Cal.

Reno Power, Light and Water Company

Directors and Officers—Same as electric utility.

**RATES IN EFFECT ON JANUARY 1, 1914, FOR ELECTRIC-
LIGHT AND -POWER, SEWER AND DRAINAGE, GAS, AND
WATER SERVICE IN THE STATE OF NEVADA.**

ELECTRIC COMPANIES**CITY OF FALLON****Schedule of Electric Rates, Effective January 1, 1914****RESIDENCE RATES**

Minimum charge, 10 kwh allowed.....	\$1 per month
Each additional kwh over 10 and less than 15.....	10c
Each additional kwh over 15 and less than 100.....	7c
Each additional kwh over 100 and less than 500.....	5½c
Over 500 kwh, power rates apply.	

BUSINESS HOUSE RATES

Minimum charge, 10 kwh allowed.....	\$1 per month
Each additional kwh over 10 and less than 40.....	10c
Each additional kwh over 40 and less than 90.....	7c
Each additional kwh over 90 and less than 500.....	5½c
Over 500 kwh, power rates apply.	

POWER RATES

Minimum charge per hp installed, 10 kwh allowed.....	\$1 per month
Each additional kwh over 10 and less than 500.....	6½c
Each additional kwh over 500 and less than 1,000.....	6c
Each additional kwh over 1,000 and less than 3,000.....	4½c
Each additional kwh over 3,000 and less than 5,000.....	1½c
Each additional kwh over 5,000 and less than 10,000.....	1c

Where more than one hp in motors are installed the minimum monthly charge will be \$1 for each hp installed, based on the maximum demand of all motors in service.

In consideration of the maximum demand clause in the government contract with the city of Fallon, an additional charge will be added to the above, amounting to \$1.50 for each kw of maximum demand, when such maximum demand exceeds 25 kw.

Maximum demand referred to in these rates is defined to be the maximum consumption of power for any five-minute period during any calendar month.

The above rates are based on the amount of electricity used in any calendar month.

CONSOLIDATED POWER AND TELEPHONE COMPANY

(Las Vegas)

1 to 20 kwh.....at 20c	61 to 70 kwh.....at 17½c	111 to 125 kwh.....at 13c
21 to 40 kwh.....at 19c	71 to 80 kwh.....at 17c	126 to 150 kwh.....at 12c
41 to 50 kwh.....at 18½c	81 to 90 kwh.....at 16c	151 to 200 kwh.....at 11c
51 to 60 kwh.....at 18c	91 to 100 kwh.....at 15c	201 kwh up.....at 10 to 8c
	101 to 110 kwh.....at 14c	

DOUGLAS MILLING AND POWER COMPANY**Schedule of Electric Rates, Effective March 1, 1913****METER RATES**

Power and all other purposes, except connected "Lighting Load" is not to exceed 10% of "Other Connected Load":

First 300 kwh per month.....	5c per kwh
Next 300 kwh per month.....	4c per kwh
Next 400 kwh per month.....	3c per kwh
Next 1,000 kwh per month.....	2c per kwh
Next 10,000 kwh per month and all excess.....	1.8c per kwh

Additional charge for motors used directly for hoisting purposes of \$2.50 per average maximum tested hp per month.

Minimum monthly charge: \$1.10 per hp connected for all motors, except motors used for hoisting purposes, and not less than \$3.30.

No discounts.

DOUGLAS MILLING AND POWER COMPANY—*Continued*

METER RATES—Power for Irrigation Purposes

First 5,000 kwh per month.....	1.7c per kwh
Next 5,000 kwh per month.....	1.5c per kwh
Next 20,000 kwh per month.....	1.3c per kwh
No discounts. No minimum monthly charge.	

METER RATES—Any and All Purposes

First 150 kwh per month.....	7c per kwh
Next 100 kwh per month.....	6½c per kwh
Next 100 kwh per month.....	6c per kwh
Next 100 kwh per month.....	5½c per kwh
Next 100 kwh per month.....	5c per kwh
All excess over 550 kwh per month.....	4½c per kwh
No discounts. Minimum monthly charge, \$1.	

ELKO-LAMOILLE POWER COMPANY

(Formerly Elko Water and Light Corporation)

Schedule of Rates for Alternating Current (Lighting Loads) Effective
January 1, 1914

For the first 10 kwh per month or less.....	\$1.65
For the next 140 kwh per month.....	14c per kwh
For the next 150 kwh per month.....	13c per kwh
For the next 150 kwh per month.....	12c per kwh
For the next 150 kwh per month.....	10c per kwh
For the next 200 kwh per month.....	9c per kwh
For the next 200 kwh per month.....	8c per kwh
For all in excess of 1,000 kwh per month.....	7c per kwh

For motor and similar day loads run on separately metered circuits, the rates will be 50% of the above, except that for the first 10 kwh the minimum rate of \$1.65 applies. A discount of 10% will be allowed on all bills (except those on which the 50% discount is applied) when paid at the office of the company on or before the 10th of the month in which due.

RATES FOR DIRECT CURRENT

15 to 500 kwh per month.....	12½c per kwh
500 to 1,200 kwh per month.....	10c per kwh

ELY LIGHT AND POWER COMPANY

Schedule of Electric Rates

For the first 50 kwh per month.....	17c per kwh
For the next 100 kwh per month.....	16½c per kwh
For the next 100 kwh per month.....	15c per kwh
For all in excess of 250 kwh per month.....	12½c per kwh
Minimum charge per month.....	\$1.50

CONTRACT RATES

Ely Packing Company. Term of contract, April 25, 1911, until ended by agreement. Amount of power and voltage at which measured, 58 hp. Rate—Up to 1,500 kwh per month at 10c; 1,500 to 2,500, 9c; over 2,500, 7c. Monthly minimum, \$60.

Troy Laundry. Term of contract, June 24, 1908, until ended by agreement. Rate, 12c per kwh. Monthly minimum, \$2.

Nevada Northern Round House. 10c for the first 1,500 kwh per month. 9c for all in excess of 1,500 kwh per month. Minimum charge, \$35 per month.

LAS VEGAS LAND AND WATER COMPANY

Schedule of Electric Rates

Current up to 20 kwh.....	20c per kwh
Current in excess of 20 kwh and not in excess of 40 kwh.....	19c
Current in excess of 40 kwh and not in excess of 60 kwh.....	18½c
Current in excess of 60 kwh and not in excess of 80 kwh.....	18c
Current in excess of 80 kwh and not in excess of 100 kwh.....	17½c

LAS VEGAS LAND AND WATER COMPANY—*Continued*

Current in excess of 70 kwh and not in excess of 80 kwh.....	17c
Current in excess of 80 kwh and not in excess of 90 kwh.....	16½c
Current in excess of 90 kwh and not in excess of 100 kwh.....	16c
Current in excess of 100 kwh and not in excess of 110 kwh.....	15½c
Current in excess of 110 kwh and not in excess of 120 kwh.....	15c
Current in excess of 120 kwh and not in excess of 130 kwh.....	14½c
Current in excess of 130 kwh and not in excess of 140 kwh.....	14c
Current in excess of 140 kwh and not in excess of 150 kwh.....	13½c
Current in excess of 150 kwh and not in excess of 160 kwh.....	13c
Current in excess of 160 kwh and not in excess of 170 kwh.....	12½c
Current in excess of 170 kwh and not in excess of 180 kwh.....	12c
Current in excess of 180 kwh and not in excess of 190 kwh.....	11½c
Current in excess of 190 kwh and not in excess of 200 kwh.....	11c
Over 200 kwh.....	10c

FLAT RATE (Maximum)

For dwellings of four rooms or less.....	\$4 per month
For dwellings in excess of four rooms.....	\$1 per month per room
FLAT RATE, in force, \$2.50 per month.	

LOVELOCK & WOOLSEY LIGHT AND POWER COMPANY

(Formerly the S. R. Young Electric Plant)

Schedule of Electric Rates

BUSINESS HOUSE RATES

40-watt tungsten and 16-cp carbons, all night.....	\$1.50 per month
40-watt tungsten and 16-cp carbons, midnight.....	1.00 per month
40-watt tungsten and 16-cp carbons, 9 p. m.....	.80 per month
60-watt tungsten and 16-cp carbons, all night.....	2.25 per month
60-watt tungsten and 16-cp carbons, midnight.....	1.50 per month
60-watt tungsten and 16-cp carbons, 9 p. m.....	1.00 per month
100-watt tungsten and 16-cp carbons, all night.....	3.50 per month
100-watt tungsten and 16-cp carbons, midnight.....	2.25 per month
100-watt tungsten and 16-cp carbons, 9 p. m.....	1.75 per month

RESIDENCE RATES

For first two 40-watt tungstens, or 16-cp carbons.....	50c each per month
For next two 40-watt tungstens, or 16-cp carbons.....	35c each per month
For all others.....	25c each per month

Minimum monthly charge, \$2.

METER RATES

1 to 50 kwh.....	15c per kwh per month
50 to 500 kwh.....	12½c per kwh per month
500 to 1,000 kwh.....	10c per kwh per month
1,000 and over.....	Special rates

Minimum monthly charge, \$2.

MASON WATER, LIGHT AND POWER COMPANY

Electric Rate Schedule

Flat Rate—Residence:

One 16-cp lamp.....	\$1.00 per month
Two 16-cp lamps.....	1.75 per month
Three 16-cp lamps.....	2.25 per month
Four 16-cp lamps.....	2.50 per month

All additional 16-cp lamps at the rate of 25c each.

Flat Rate—Business houses, all-night service:

One 16-cp lamp.....	\$1.50 per month
Two 16-cp lamps.....	2.50 per month
Three 16-cp lamps.....	3.50 per month
Four 16-cp lamps.....	4.50 per month

All additional 16-cp lamps at the rate of 50c each.

MASON WATER, LIGHT AND POWER COMPANY—*Continued*

Flat rate—Business houses, 10-o'clock closing:

One 16-cp lamp.....	\$1.00 per month
Two 16-cp lamps.....	1.75 per month
Three 16-cp lamps.....	2.50 per month
Four 16-cp lamps.....	3.00 per month

All additional 16-cp lamps at the rate of 50c each.

Meter Rates—Business and Residence:

First 100 kwh.....	10c per kwh
Second 100 kwh.....	9c per kwh
Third 100 kwh.....	8½c per kwh
Fourth 100 kwh.....	8c per kwh
Fifth 100 kwh.....	7½c per kwh
All over 500 kwh.....	7c per kwh

Minimum charge, \$2.50 per month.

Meter Rate—Business houses using over minimum..... 8c per kwh

THE NEVADA-CALIFORNIA POWER COMPANY

Electric Rate Schedule

LIGHTING SCHEDULE

For the first 50 kwh per month.....	9c per kwh
For the next 50 kwh per month.....	8c per kwh
For the next 150 kwh per month.....	7c per kwh
For the next 250 kwh per month.....	5c per kwh
For the next 500 kwh per month.....	4c per kwh
For all excess over 1,000 kwh per month.....	3½c per kwh

Minimum monthly charge, \$1.50.

COOKING AND HEATING SCHEDULE

Where special meter is installed.....5c per kwh

Minimum monthly charge, \$1.50.

COMMERCIAL POWER SCHEDULE

Up to 500 kwh per Month

For the first 100 kwh per month.....	6c per kwh
For the next 150 kwh per month.....	5c per kwh
For the next 250 kwh per month.....	4c per kwh

Minimum monthly charge, \$1.50.

INDUSTRIAL POWER SCHEDULE

Also All Other Power Service Which Exceeds a Consumption of 500 kwh per month

For the first 1,000 kwh per month.....	3.25c per kwh
For the next 3,000 kwh per month.....	3.00c per kwh
For the next 4,000 kwh per month.....	2.75c per kwh
For the next 6,000 kwh per month.....	2.40c per kwh
For the next 14,000 kwh per month.....	2.25c per kwh
For the next 27,000 kwh per month.....	2.00c per kwh
For the next 27,000 kwh per month.....	1.80c per kwh
For the next 27,000 kwh per month.....	1.40c per kwh
For the next 27,000 kwh per month.....	1.30c per kwh
For the next 27,000 kwh per month.....	1.25c per kwh
For the next 54,000 kwh per month.....	1.20c per kwh
For the next 110,000 kwh per month.....	1.15c per kwh
For all in excess of 327,000 kwh per month.....	1.14c per kwh

Minimum monthly charge, 25c per connected hp of motors.

METER DEPOSITS

For consumers with monthly bills of less than \$5.....\$5.00

For consumers with monthly bills of more than \$5, the deposit shall not exceed the monthly bill.

PACIFIC POWER COMPANY**Schedule of Electric Rates for State of Nevada, Effective January 1, 1913****POWER RATES**

For intermittent or hoisting service the charge is made up of a readiness to serve charge of \$2 per hp per month, based on the rated hp capacity of the motor, plus 4c per kwh for all power actually consumed.

For continuous service for mines or mills, the total consumption being less than 8,168 kwh (15 hp):

Up to 2,500 kwh (4.59 hp) per month.....at 4c per kwh

Excess over 2,500 kwh up to 8,168 kwh (15 hp).....at 3c per kwh

For continuous or mill service (long-term contracts for large consumers):

Over 8,168.7 kwh (15 hp) up to and including 13,614.5 kwh (25 hp).....at 3c per kwh

Over 13,614.5 kwh (25 hp) up to and including 27,229 kwh (50 hp).....at 2½c per kwh

Over 27,229 kwh (50 hp) up to and including 54,458 kwh (100 hp).....at 2¼c per kwh

Over 54,458 kwh (100 hp) up to and including 81,687 kwh (150 hp).....at 2¼c per kwh

Over 81,687 kwh (150 hp) up to and including 108,916 kwh (200 hp).....at 2c per kwh

Over 108,916 kwh (200 hp) up to and including 136,145 kwh (250 hp).....at 1.85c per kwh

Over 136,145 kwh (250 hp) up to and including 163,374 kwh (300 hp).....at 1.7c per kwh

Over 163,374 kwh (300 hp) up to and including 217,832 kwh (400 hp).....at 1.6c per kwh

Over 217,832 kwh (400 hp) up to and including 326,648 kwh (600 hp).....at 1.5c per kwh

Over 326,648 kwh (600 hp) up to and including 544,580 kwh (1,000 hp).....at 1.4c per kwh

For the mining and milling of very low-grade ores where power in excess of 400 hp will be used, special contracts will be made whereby the charge for the power used will be based upon the values of the ores mined and milled as follows: The basis rate shall be 1c per kwh for power used for the mining or treatment of ores the value of which is \$5 per ton, with a decrease in the rate of one-half mill (\$.005) per kwh for each decrease on twenty-five cents (25c) in the value of the ore below \$5,000 per ton, and an increase in the rate of one-half mill (\$.005) for each increase of twenty-five cents (25c) in the value of the ore over \$5 per ton.

LIGHTING SERVICE

The following charges to flat-rate consumers will be made for each month or fraction of month throughout the consumer's connection with the company's service:

Business houses—First ten 60-watt lights \$1 each, additional 75c each.

Residences—First two lights \$1 each, additional 50c each.

Flat irons (residence), \$1 each.

The following charges to consumers using meters will be made:

SHORT-HOUR SERVICE

Residences, Early-Closing Stores, Etc.

Consumption of 50 kwh or under.....20c per kwh

Consumption over 50 kwh and under 100 kwh.....18c per kwh

Consumption over 100 kwh.....15c per kwh

LONG-HOUR SERVICE

Hotels, Saloons, and Other All-Night Service

Consumption over 50 kwh and under 100 kwh.....15c per kwh

Consumption over 100 kwh and under 200 kwh.....13c per kwh

Consumption over 200 kwh and under 300 kwh.....11c per kwh

Consumption over 300 kwh and under 500 kwh.....10c per kwh

Consumption over 500 kwh.....9c per kwh

COOKING AND HEATING SERVICE

5c per kwh.

All the above meter rates subject to 10% discount if paid on or before the 10th day of the month next following the month for which bills have been rendered.

It must be distinctly understood that no discounts will be allowed unless bills are paid in full, as above specified.

MINIMUM CHARGES

For lighting, \$2 per month or fraction thereof.

For heating and cooking, \$3 per month or fraction thereof.

No discounts allowed on minimum charges.

PRINTED SCHEDULES

The only printed schedules in use by the company are above set forth.

PACIFIC POWER COMPANY—Continued

CONTRACT RATES

Aurora Consolidated Mines Company. Term of contract, May 1, 1914, to May 1, 1920. Amount of power, 400 hp or more.

<i>Recovered values of ore</i>	<i>Rate per kw-h</i>
\$7.00	1.40c
\$6.75	1.35c
\$6.50	1.30c
\$6.25	1.25c
\$6.00	1.20c
\$5.75	1.15c
\$5.50	1.10c
\$5.25	1.05c
\$5.00	1.00c
\$4.75	0.95c
\$4.50	0.90c
\$4.25	0.85c
\$4.00	0.80c
\$3.75	0.75c
\$3.50	0.70c
\$3.25	0.65c
\$3.00	0.60c

RENO POWER, LIGHT AND WATER COMPANY

Electric Rate Schedule for Reno Only, Effective June 1, 1912

Meter Rates—Any and all purposes:

First 150 kw-h	7c per kw-h
Next 100 kw-h	6c per kw-h
Next 100 kw-h	5c per kw-h
Next 100 kw-h	4c per kw-h
Next 100 kw-h	3c per kw-h
Excess over 550 kw-h	2c per kw-h

Minimum monthly charge, \$1. Discounts—None.

Meter Rates—Power and all other purposes, excepting "Connected Lighting Load" is not to exceed 10% of "Other Connected Load":

First 300 kw-h	5c per kw-h
Next 300 kw-h	4c per kw-h
Next 400 kw-h	3c per kw-h
Next 1,000 kw-h	2c per kw-h
Next 8,000 kw-h	1.8c per kw-h
Next 10,000 kw-h	1.7c per kw-h
Next 30,000 kw-h	1.6c per kw-h
Excess over 50,000 kw-h	1.5c per kw-h

Minimum monthly charge, \$1 per connected hp and not less than \$3.

Discounts—10%: where consumer uses and company meters current at 4,000 or 2,200 volts. 10% when bills are paid on or before 10th day of month next following that for which bill is rendered.

Flat Rates—

Residence: 30c per 16-cp equivalent per month.

Business: Under ten hours burning per day, 50c per 16-cp equivalent per month.

Over ten hours burning per day, 70c per 16-cp equivalent per month.

Business Arc Lamps: Under ten hours burning per day, \$6 per month.

Over ten hours burning per day, \$8 per month.

Minimum, 90c. Discounts—None.

Note: The following percentage shall be used in figuring equivalents of carbon lamps: 16 cp, 100; 32 cp, 200; 8 cp, 60; 4 cp, 40; 2 cp, 20. Tungsten and tantalum lamps figured on basis of 16-cp equivalent to 50 watts.

Flat Rate Schedule for Residence Flat Irons, Desk and Ceiling Fans, Curling Irons, Sewing and Washing Machine Motors and Similar Service. This class of service supplied only where lighting is supplied:

Flat Irons: 600 volt amps, or less, 75c net per month.

Over 600 volt amps, \$1.75 net per month.

Desk Fans: 12 in. or smaller, \$1.50 net per month.

Over 12 in., \$2 net per month.

RENO POWER, LIGHT AND WATER COMPANY—Continued

Ceiling fans, \$2.50 net per month.

Curling Irons, 50c net per month.

Sewing and Washing Machine Motors and Similar Motors, $\frac{1}{8}$ hp. or less, \$1 net per month.

Heaters and Similar Service: Per rated kva, \$15 net per month.

Flat Rate Schedule for Business Flat Irons, Desk and Ceiling Fans, Curling Irons, Sewing and Washing Machine Motors and Similar Service. This class of service supplied only where lighting is supplied:

Flat Irons: Per rated kva, \$15 net per month.

Desk Fans: 12-in. or less, \$1.50 net per month.

Over 12-in., \$2 net per month.

Ceiling Fans, \$3 net per month.

Curling Irons, \$1 net per month.

Sewing and Washing Machine Motors and Similar Motors: Per rated hp, \$10 net per month.

Heaters and Similar Appliances: Per rated kva, \$15 net per month.

Flat Rate for Commercial Series and Multiple Arc Lighting:

Burning less than ten hours per night, \$7 net per month.

Burning over ten hours per night, \$8 net per month.

Outside Corporate Limits of the Cities of Reno and Sparks

Meter rates for any and all purposes, 10c per kwh. Minimum monthly charge, \$1.

Electric Rates in City of Sparks

Meter Rates for Any and All Purposes:

First 150 kwh.....7c per kwh

Next 100 kwh.....6½c per kwh

Next 100 kwh.....6c per kwh

Next 100 kwh.....5½c per kwh

Next 100 kwh.....5c per kwh

Excess over 550 kwh.....4½c per kwh

Minimum monthly charge, \$1.

Flat rates for Incandescent Lighting: 70c per month per 50 watts. Minimum monthly charge, \$1.

Flat Rate Schedule for Municipal Lighting. Lights to burn from one-half hour after sundown to one-half hour before sunrise each night:

Arc Lighting:

Less than fifty lights in use:

During first year each light is installed, \$6 each per month.

After first year each light is installed, \$5 each per month.

Fifty or more lights in use:

For each light installed, \$5 each per month.

Rebates: 25c on the above rates for each night a light is out over one hour.

Incandescent Lighting: For each 60 watt installed, \$1 net per month.

Supplement No. 2 to Above Schedule; Effective August 1, 1912

For consumers operating plants, in which principal use of power is for refrigeration, and compressor motors to take current at primary voltage.

Term of Contract—Ten (10) years.

Minimum Monthly Charge—One (\$1) dollar per hp of motors connected and not less \$200 when plant is operated.

Rate, 1.25c per kwh.

Discounts—None.

Supplement No. 3 to Above Schedule, Effective November 15, 1914

For power and all other purposes, except "Connected Lighting Load" is not to exceed 10% of "Other Connected Load." Plant to use "No Power" from 5 p. m. to 10 p. m. daily during the months of November to March, inclusive. Current to be furnished and metered at 2,200 or 4,000 volts or furnished at transmission voltage and metered on low-tension side of consumers' high-tension transformers.

Term of Contract—Not less than five (5) years.

Minimum Monthly Charges—\$1 per rated hp of motors connected and not less than \$450. This minimum monthly charge is to be discontinued during any calendar month in which the plant is shut down and no power is used, provided consumer gives thirty days' written notice.

Rate—For first 50,000 kwh per month, 1.2c per kwh. All excess over 50,000 kwh per month, 1c per kwh.

Discount—10% on the above rate when payments are made on or before the 15th of the month next following that for which the bill rendered.

STEPTOE VALLEY SMELTING AND MINING COMPANY**Electric Rate Schedule**

Rate per Month per Lamp, for 24 Hours per Day Service.

	<i>To Employees— Residences</i>	<i>To Others than Employees— Residence</i>	<i>Stores</i>
Incandescent lamps, 8 cp.....	\$0.50	\$0.50	\$0.62½
Incandescent lamps, 16 cp.....	.80	1.00	1.25
Incandescent lamps, 32 cp.....	1.60	2.00	2.50
Tungsten lamps, 25 cp.....	.50	.60	.75
Tungsten lamps, 40 cp.....	.80	1.00	1.25
Tungsten lamps, 60 cp.....	1.20	1.35	1.90
Tungsten lamps, 100 cp.....	---	---	3.25
Tungsten lamps, 150 cp.....	---	---	4.70
Tungsten lamps, 250 cp.....	---	---	5.25
Power—Electric fans.....	---	---	5.00
Power—5 amp irons.....	---	---	5.00

THE TRUCKEE RIVER GENERAL ELECTRIC COMPANY**Schedule of Electric Rates, Effective June 1, 1912****METER RATE—Any and all purposes**

First 150 kwh.....	7c per kwh
Next 100 kwh.....	6½c per kwh
Next 100 kwh.....	6c per kwh
Next 100 kwh.....	6½c per kwh
Next 100 kwh.....	5c per kwh
All excess over 550 kwh.....	4½c per kwh

Minimum monthly charge, \$1. Discounts—None.

METER RATES

Power and all other purposes, except connected "Lighting Load" is not to exceed 10% of "Other Connected Load":

First 300 kwh.....	5c per kwh
Next 300 kwh.....	4c per kwh
Next 400 kwh.....	3c per kwh
Next 1,000 kwh.....	2c per kwh
Next 8,000 kwh.....	1.8c per kwh
Next 10,000 kwh.....	1.7c per kwh
Next 30,000 kwh.....	1.6c per kwh
All excess over 50,000 kwh.....	1.5c per kwh

Additional charge for motors used directly for hoisting purposes of \$2.50 per average maximum tested hp per month.

Minimum monthly charge: \$1.10 per hp connected for all motors, except motors used for hoisting purposes, and not less than \$3.30.

Discounts: 10% when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformer and company meters current on low-tension side of transformers.

10% when bill is paid on or before the 15th day of month next following that for which bill is rendered.

For power and all other purposes, except connected "Lighting Load" is not to exceed 10% of "Other Lighting Load."

Term of contract—Not less than five years.

Minimum monthly charge: \$1.10 per rated hp of motors installed except motors used for hoisting purposes, and not less than \$3.30.

Rate as follows:

For first 300 kwh.....	5c per kwh
For next 300 kwh.....	4c per kwh
For next 400 kwh.....	3c per kwh
For next 1,000 kwh.....	2c per kwh
For next 8,000 kwh.....	1.8c per kwh
For next 10,000 kwh.....	1.7c per kwh
For next 30,000 kwh.....	1.6c per kwh
For all excess over 50,000 kwh.....	1.5c per kwh

THE TRUCKEE RIVER GENERAL ELECTRIC COMPANY—Continued

Additional charge of \$1.25 per month per average maximum tested hp input to each hoist motor when operating at full speed with load.

Discount: 10% on the above rates when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the 15th of the month next following that for which the bill is rendered.

For consumer controlling reduction works which run twenty-four hours a day, also for mines which are controlled by the same party that controls such reduction works, and whose outputs are treated at such reduction works. Current to be furnished and metered at 2,200 volts or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Term of contract—Not less than five years.

Minimum monthly charge: \$1 per rated hp of motors connected and not less than \$500 during the months of April to November, inclusive, except that the minimum may be discontinued for such period of time during which no current is used, provided the consumer gives 60 days' written notice.

Rate: 1.07c per kwh plus an additional charge of \$2.25 per month per average maximum tested hp input to each hoist motor.

Discounts: 10% of the above rates when payments are made on or before the 15th of the month next following that for which the bill is rendered.

For Irrigation Purposes: Power not to be used between the hours of 6 to 11 p. m. daily and only during the months from April to October, inclusive, of each year. Power to be supplied and metered at 2,200 volts or supplied at transmission voltage and metered on the low-tension side of consumer's high-tension transformers.

Term of contract—Not less than five years.

Minimum: \$3 per season per rated hp of motors connected, or per rated installed capacity of high-tension transformers figured in kilovolt amperes, if they exceed by 50% the rated capacity of the motors connected.

Rates:

For first 5,000 kwh	1.7c per kwh
For next 5,000 kwh	1.5c per kwh
For next 20,000 kwh	1.3c per kwh
All excess over 30,000 kwh	1.2c per kwh

Discounts: 10% on the above rates where payments are made on or before the 15th of the month next following that for which bill is rendered.

FLAT RATE—Incandescent lighting only

Rate per month:

No. 16-cp or equivalent	Residences and churches	Business	Saloons
One or less	\$1.00	\$1.00	\$1.00
Two	1.25	1.60	1.80
Three	1.50	2.20	2.60
Four	1.75	2.70	3.40
Five	2.00	3.30	4.20
Each additional .....	.20	.60	.80

Note: The following percentage shall be used in figuring equivalent of carbon lamps: 16-cp, 100; 32-cp, 200; 8-cp, 60; 4-cp, 40; 2-cp, 25. Tungsten and tantalum lamps figured on basis of 16-cp equivalent to 50 watts.

Flat-Rate Schedule for Residence Flat Irons, Desk Fans, Ceiling Fans, Curling Irons, Sewing Machine Motors, Washing Machine Motors, or Similar Services. This class of service supplied only where lighting is supplied:

Flat irons: 600 volt amps or less	\$1.00 net per month
Over 600 volt amps	2.00 net per month
Desk fans: 12 in. or smaller	1.50 net per month
Over 12 in.	2.00 net per month
Ceiling fans	2.50 net per month
Curling irons .....	.50 net per month
Sewing, washing machine and similar motors $\frac{1}{2}$ hp or less	1.00 net per month
Heaters and similar appliances, per rated kva	15.00 net per month

Flat-Rate Schedule for Business Flat Irons, Desk Fans, Ceiling Fans, Curling Irons, Sewing Machine Motors, Washing Machine Motors and Similar Service. This class of service supplied only where lighting is supplied:

Flat irons, per rated kva	\$15.00 net per month
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THE TRUCKEE RIVER GENERAL ELECTRIC COMPANY—*Continued*

Desk fans, 12 in. or less.....	\$1.50 net per month
Over 12 in.....	2.00 net per month
Ceiling fans.....	3.00 net per month
Curling irons.....	1.00 net per month
Sewing, washing machines and similar small motors, per rated hp.....	19.00 net per month
Heaters and similar appliances, per rated kva.....	15.00 net per month

Flat-Rate Schedule for town and county multiple and series street and park lighting. Lights to be burned from dark to daylight only each night. A town and county may combine within the limits of the town, in order to derive the benefit of the quantity rate:

Arc Lighting:	
For first 7 lights.....	\$8.00 each per month
All over 7 lights.....	5.00 each per month
Incandescent Lighting:	
For each 60 watts installed.....	\$1.00 per month

For Commercial Series or Multiple Arc Lighting: Rate, \$8 each per month.

CONTRACT RATES

- Comstock Golden Gate Mining Company, Virginia City. Term of contract, Feb. 1, 1908, to Feb. 1, 1918. Amount of power and voltage at which measured, 100 hp, 2200 V. Rate, 1½¢ per kwh. Monthly minimum, \$30.
- H. F. Dangberg Land and Live Stock Company, Minden. Term of contract, Oct. 15, 1906, to Oct. 15, 1916. Amount of power and voltage at which measured, 2200 V. Rate, 1½¢ kwh.
- Floriston Pulp and Paper Company, Floriston. Term of contract, Oct. 15, 1908, to Oct. 15, 1918. Amount of power and voltage at which measured, 250 hp, 2200 V. Rate, \$3.50 per hp per month. Monthly minimum, \$250.
- Mason Townsite Company, Mason. Term of contract, April 15, 1911, to April 15, 1920. Amount of power and voltage at which measured, 2200 V. Rate, 2¢ per kwh. Monthly minimum, \$50.
- Nevada Gypsum Company, Mound House. Term of contract, April 1, 1909, to April 1, 1919. Amount of power and voltage at which measured, 225 hp, 2200 V. Rate, \$700 per month flat rate. Monthly minimum, \$1 per connected hp.
- New York Nevada Mining Company. Term of contract, Jan. 15, 1907, to Jan. 15, 1917. Amount of power and voltage at which measured, 50 hp, 2200 V. Rate, 1½¢ per kwh, plus \$2.50 per maximum tested hp on all hoists. Monthly minimum, \$15.
- August Pfeifer Mine, Virginia City. Term of contract, March 1, 1909, to March 1, 1914. Amount of power and voltage at which measured, 50 hp, 2200 V. Rate, 2¢ per kwh, plus \$2 per maximum tested hp on hoists. Monthly minimum, \$20.
- Kinkead Mill and Mining Company, Virginia City. Term of contract, June 1, 1907, to June 1, 1917. Amount of power and voltage at which measured, 100 hp, 2200 V. Rate, 1½¢ per kwh, plus \$2.50 per maximum tested hp on hoist motors. Discount, bills exceeding \$100, 25 per cent.
- United Comstock Pumping Association. Term of contract, Oct. 17, 1904, to Oct. 17, 1914. Amount of power and voltage at which measured, 750 to 1000 hp, \$6 per hp month; 1000 to 1250 hp, \$5.50; 1250 to 3500 hp, \$5; 3500 to 5000 hp, \$4.50 (2200 V). In addition to the above meter rates to pay \$2 per maximum tested hp on hoist motors consuming less than 400 kwh per tested hp, to be paid for at 9¢ per kwh on 400 kwh.
- Verdi Lumber Company, Verdi. Term of contract, Jan. 1, 1906, to Jan. 1, 1916. Amount of power and voltage at which measured, 3000 16-cp, 5-hp motor, 2200 V. Rate, \$12.50 per 120 16-cp equivalent or fraction thereof. Monthly minimum, \$125.
- Verdi Lumber Company, Verdi. Term of contract, Sept. 28, 1907, to Sept. 28, 1917. Amount of power and voltage at which measured, 250 hp, 2200 V. Rate—Transfer of water rights for power purposes.
- Mason Valley Mines Company. Term of contract, Dec. 1, 1910, to Nov. 1, 1916; option 5 years more. Amount of power and voltage at which measured, 2200 V. Rate, 1.4¢ per kwh for first 43,000 kwh, 0.9¢ per kwh for all excess consumption over 43,000 kwh; also \$2 per maximum tested hp on hoists. Monthly minimum, \$1,000, to be increased in proportion for increase in power over 800 kwh.
- Western Gypsum Company. Term of contract, Oct. 1, 1907, to Oct. 1, 1917. Amount of power and voltage at which measured, 440 V. Rate, 1½¢ per kwh plus \$2.50 per tested hp on hoist motors. Discounts, \$150 to \$250 10 per cent, \$250 to \$500 15 per cent, \$500 to \$1,000 20 per cent, \$1,000 or over 25 per cent. Monthly minimum, \$1 per hp connected.
- Nevada Douglas Copper Company, Morning Star. Term of contract, Jan. 1, 1907, to Jan. 1, 1917. Amount of power and voltage at which measured, 600 hp, 440 V. Rate, first 200 hp, \$80 per hp year; over 200 up to 300 hp, \$50 per hp year; for all over first 200 hp over 300 up to 500 hp, \$45 per hp year; for all over first 200 hp over 500 hp, \$40 per hp year for all over first 300 hp. In addition \$2.50 per tested hp on hoists. Monthly minimum, \$250.

Bluestone Mining and Smelting Company, Yerington. Term of contract, Jan. 1, 1907, to Jan. 1, 1917. Amount of power and voltage at which measured, 1000 hp, 2200 V. Rate, 200 hp or less, \$60 per hp per annum; 200 to 300 hp, \$50 per hp year; 400 to 499 hp, \$45 per hp year; 500 or over, \$40 per hp year. Monthly minimum, \$250.

C. T. Martin, Yerington. Term of contract, June, 1911, to June, 1916. Amount of power and voltage at which measured, 7½ hp connected, 2200 V. Rate, 1½c per kwh plus 50c per connected hp per month. Discounts—Up to \$100, none; next \$100, 20 per cent; over \$200, 25 per cent. Monthly minimum, \$3 per hp connected per season from April 1 to Oct. 1.

WINNEMUCCA WATER AND LIGHT COMPANY

Schedule of Electric Rates

Minimum	\$2.00
Allowance for minimum	13 kwh
From 13 to 50 kwh	15c per kwh
From 50 to 150 kwh	12½c per kwh
From 150 to 300 kwh	10c per kwh
From 300 on	8c per kwh

WATER COMPANIES

AMALGAMATED POCHE MINES AND SMELTERS CORPORATION

Schedule of Water Rates

	Monthly rate	If paid by 15th
Animals—Horses	\$0.55	\$0.50
Cows .....	.55	.50
Assay office	2.20	2.00
Barber shop	5.50	5.00
Per chair	2.20	
Per bathtub	1.10	
Minimum charge	4.40	
Blacksmith shop	2.20	2.00
Per forge	2.20	
Each additional forge	2.20	
Corral	5.50	5.00
Cemeteries, for the season, April to September, inclusive	25.00	
Drug store, not including soda fountain	2.20	2.00
Soda fountain, 50c to \$2 additional.		
Gardens and trees, for months of April to October, inclusive	30c to 1.10	25c to 1.00
Hospital, per bed .....	.12	.10
Minimum rate covering beds	2.20	2.00
When used also as residence, add	3.30	3.00
Hotels, rooming-houses or lodging-houses, for each room for rent .....	.12	.10
For use as residence, add	3.30	3.00
For boarding table, add	3.30	3.00
Laundry	4.00	3.50
Livery stable, boarding 10 horses or less, minimum rate	8.25	7.50
Meat market, minimum charge	2.20	2.00
Mines and mining companies, to be arranged in each case according to the amount of machinery, etc.		
Restaurants	6.50	6.00
Residences, tap indoors; toilet	3.50	3.25
Tap indoors; no toilet	3.30	3.00
Tap outdoors; less than 100 yards distant	2.75	2.50
Tap outdoors; more than 100 yards distant	2.20	2.00
Saloons, tap indoors for use at bar	5.50	5.00
Each extra tap additional .....	.55	.50
Lavatory	2.75	2.50
Minimum rate	4.40	4.00
Slaughter-houses. Average number of animals at the slaughter-house at the rate for "Animals."		
Stores, tap used for washing and drinking purposes only	2.20	2.00
Same as above; also used by person rooming at the store, add	1.10	1.00
For each additional person rooming at the store, add	1.10	1.00

AUSTIN WATER COMPANY**Schedule of Water Rates**

Dwelling houses, minimum rate	\$1.00 per month
Minimum rate, if occupied by family	1.50 per month
Additional charge for each bathtub, water closet or stationary laundry tub ..	.50 per month
Additional charge for each family using same service, to be paid by house with service	1.00 per month
Additional charge for each cow or horse kept in private stable .....	.25 per month
Extra charge during months of June, July, August, and September for sprinkling lawns, garden or shrubbery, per square foot .....	.005 per month
Hotels, 10 rooms or less	10.00 per month
For each additional room .....	.25 per month
Laundries	10.00 per month
Saloons	4.00 per month
Barber shops, two chairs or less	2.00 per month
For each additional chair .....	.50 per month
For each bathtub	1.00 per month
Blacksmith shops, two forges or less	2.00 per month
For each additional forge .....	.50 per month
Restaurants	8.00 per month
Butcher shops	2.00 per month
Offices, per person .....	.25 per month
Stores	2.50 per month
Livery stables	10.00 per month

METER RATES

Up to 15,000 gallons per month	\$1.00 per 1,000 gals.
Exceeding 15,000 gallons per month .....	.75 per 1,000 gals.
Minimum rate per month, \$1.	

CARSON WATER COMPANY

<i>Rates per month (Winter rates)</i>	<i>Number of consumers</i>	<i>Rates per month (Winter rates)</i>	<i>Number of consumers</i>
\$1.00	37	\$8.00	1
\$1.50	119	\$10.00	2
\$2.00	163	\$11.00	1
\$2.50	64	\$12.00	2
\$3.00	37	\$12.50	1
\$3.50	10	\$13.00	1
\$4.00	14	\$14.50	1
\$5.00	13	\$15.00	2
\$6.00	5	\$40.00	1
\$6.50	1	\$50.00	2
\$7.00	1		

During the summer months, commencing May 1, there is an additional charge for irrigation from 50 cents to \$1.50 per month, depending upon the amount of ground irrigated.

CITY OF FALLON**Schedule of Water Rates**

Minimum monthly charge	\$1.00
Minimum	3,000 gallons allowed
Over 3,000 and less than 5,000 gallons	35c per 1,000 gals.
Maximum charge under above rate	\$1.50
Over 5,000 and less than 10,000 gallons	30c per 1,000 gals.
Maximum charge under above rate	\$2.50
Over 10,000 gallons	25c per 1,000 gals.

ELKO WATER CORPORATION**SERVICE CONNECTION CHARGES**

Minimum charges	\$1.00
Not more than 30 feet.....	5.00
30 feet to 75 feet.....	10.00
More than 75 feet, per foot.....	.15
(Curb box extra)	

MONTHLY RATES

Barber shops, 1 or 2 chairs	2.50
Each additional chair.....	.50
Public bath.....	2.50
Beer pump.....	3.00
Blacksmith shop, 1 or 2 forges.....	2.50
Each additional forge.....	.50
Boarding-house, not over 10 rooms.....	2.50
Each additional room.....	.10
Running water, each room.....	.25
Brick work, per 1,000 brick.....	.10
Butcher shop.....	2.50
Candy shop.....	2.50
Cemetery (meter rates), minimum charge.....	3.00
Church (meter rates for lawn).....	2.50
Club room.....	2.50
Concrete work, cubic yard.....	.10
Concrete sidewalk, square yard.....	.10
Circus (minimum charge).....	10.00
Drug store.....	2.50
Dwellings, one family, with one bath and closet.....	2.50
Each additional bath or closet.....	1.00
Each additional family.....	1.00
(All subject to meter rates.)	
Maximum allowance, 10,000 gallons.	
Extra charge as follows:	
All excess, per 1,000 gallons.....	.25
Private stable tap.....	1.00
Fire hydrant tap.....	2.50
Hotel with restaurant, up to 10 rooms.....	10.00
Each additional room.....	.10
Each room with water.....	.25
Flushing sewers (special).....	
Ice cream parlor.....	2.50
Laundry.....	10.00 up
Steam laundry (minimum charge).....	10.00
Livery stable.....	5.00 to 10.00
Offices.....	1.00 to 2.50
Plastering, per square yard.....	.01
Photograph gallery.....	2.50
Printing office.....	2.50
Railway tanks (special rates).....	
Restaurant.....	5.00
Schools, special rates (metered).....	
Soda fountain.....	2.50
Soda factory (subject to meter).....	3.00
Private stable.....	2.50
Stone work, perch.....	.10
Store or shop.....	2.50
Bakery.....	2.50
Street sprinkling (special), meter rates.....	
Sewer flushing (special), meter rates.....	
All toilets, baths, and urinals in addition to above, each.....	1.00

METER RATES

1,000 to 5,000 gallons, per 1,000 gallons.....	.50
5,000 to 10,000 gallons, per 1,000 gallons.....	.40
10,000 to 50,000 gallons, per 1,000 gallons.....	.25
50,000 to 200,000 gallons, per 1,000 gallons.....	.20
Over 200,000 gallons.....	Special terms

ELY WATER COMPANY**Schedule of Water Rates****MONTHLY RATES**

Water for 12 fire hydrants.....	Free
Water for additional fire hydrants, each	\$5.00
Residences, 1 to 5 rooms.....	1.50
Each additional room .....	.25
Water closet.....	.50
Bathtub .....	.50
Hotels, 1 to 10 rooms.....	3.50
Each additional room .....	.15
Each table less than 6 people .....	.75
Each table more than 6 people	1.00
Water closets every 15 rooms, each.....	1.50
Bathtub every 15 rooms, each.....	1.00
Livery stable, per stall .....	.50
Livery stable, per vehicle .....	.25
Saloon, each faucet over 1	1.00
Water closets, each.....	2.50
Urinals, each.....	2.00
Minimum charge, each.....	3.00
Restaurant, each table under 6 persons .....	.75
Each table over 6 persons.....	1.00
Minimum charge.....	3.50

METER RATES

Up to 25,000 gallons, per 1,000 gallons .....	.50
25,000 to 50,000 gallons, per 1,000 gallons .....	.40
50,000 to 150,000 gallons, per 1,000 gallons .....	.30
150,000 to 600,000 gallons, per 1,000 gallons .....	.25
More than 600,000 gallons, per 1,000 gallons .....	.20

If bill is \$10 or less, consumer must pay \$1 per month meter rental

LAWN IRRIGATION

One lot, 25 by 100, per season.....	\$6.00
Adjacent additional lot or portion of lot owned by same person.....	5.00
Water for sprinkling streets, Courthouse, hospitals, City Hall and schoolhouses.....	Free
City of Ely.....	115.00
Troy Laundry.....	35.00
Ely Packing Company	35.00
Brewery.....	45.00
Ely Light and Power Company	300.00
Steptoe Hospital	6.00

ESMERALDA WATER AND MILLING COMPANY**Schedule of Water Rates**

For each residence.....	\$2.00 per month
For each animal	1.50 per month
For each livery stable.....	10.00 per month
For each blacksmith shop	2.50 per month
For each hotel or boarding-house.....	10.00 per month
For each laundry	5.00 per month
For each store	2.50 per month

TRANSIENT RATES AT TOWN TAP AT CANDELARIA

For each animal	25c per day
For each individual	2c per gallon
At company's reservoirs	2c per gallon

Water for irrigation of trees, lawns and gardens will be supplied during the months of May, June, July, August, and September at a rate of \$7.50 per month for each consumer, or if a meter be installed, at the rate of \$4 per 1,000 gallons.

EUREKA WATER WORKS**Schedule of Water Rates**

County rates for fire purposes and buildings.....	\$100.00 per month
Saloon rates.....	4.00 per month
Domestic service, according to number of persons.....	\$1.00 to 3.00 per month
Breweries and bottling works.....	8.00 per month
School service.....	8.00 per month
Stables.....	3.00 per month
Hotels and restaurants.....	10.00 per month

GOLDFIELD CONSOLIDATED WATER COMPANY**Schedule of Water Rates****MONTHLY RATES**

Up to 3,000 gallons, per gallon.....	\$.0075
3,000 to 5,000 gallons, per gallon.....	.005
5,000 to 10,000, per gallon.....	.004
10,000 to 20,000 gallons, per gallon.....	.0035
20,000 to 50,000 gallons, per gallon.....	.003
Retail consumers, minimum charge.....	2.00

Discounts—If bills are paid by the 10th of the month on 3,000 gallons or less, 83½ per cent; (discount on 3,000 gallons or less, 20 per cent if bills are paid by the 10th; effective October 31, 1911); 3,000 to 5,000 gallons, 83½ per cent on 3,000 gallons, and 10 per cent on remainder; 5,000 to 10,000 gallons, 83½ per cent on the first 3,000 gallons, and 5 per cent on remainder.

Consumers using 50,000 gallons or more per month are classed as wholesale.

WHOLESALE RATES

50,000 to 75,000 gallons, per 1,000 gallons.....	\$3.00
75,000 to 150,000 gallons, per 1,000 gallons.....	2.50
150,000 to 300,000 gallons, per 1,000 gallons.....	2.00
300,000 to 450,000 gallons, per 1,000 gallons.....	1.50
Over 450,000 gallons, per 1,000 gallons.....	1.00

Discount, 10 per cent if paid by the 10th.

LAWN RATES

Per 1,000 gallons.....	\$4.00
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Discount, 50 per cent if paid by the 10th.

RATES FOR CONSUMERS WITH SEWER CONNECTIONS

Residences, 1 to 3 rooms, per month.....	\$3.00
4 to 6 rooms, per month.....	4.00
7 to 9 rooms, per month.....	5.00
Bakeries, per month.....	5.00
Barber shops, per month.....	10.00
Billiard rooms, per month.....	5.00
Boarding-houses, per month.....	10.00
Breweries, per month.....	15.00
Butcher shops, per month.....	5.00
Candy factories, per month.....	5.00
Cigar factories, per month.....	5.00
Club rooms, per month.....	5.00
Confectioners, per month.....	5.00
Saloons, per month.....	10.00
Halls, per month.....	5.00
Ice cream parlors, per month.....	5.00
Assay offices, per month.....	5.00
Livery stables, per month.....	10.00
Offices, per month.....	2.00
Photograph galleries, per month.....	5.00
Restaurants, per month.....	10.00
Soap factories, per month.....	10.00
Stores, per month.....	5.00
Laundries, per month.....	10.00

GOLDFIELD CONSOLIDATED WATER COMPANY—*Continued*

Hotels, 10 rooms and less, per month.....	\$10.00
All over 10 rooms, per room, per month.....	.25
Hospitals, per month.....	15.00
Office buildings, 20 rooms or less, per room, per month.....	1.00
More than 20 rooms, each, per room, per month.....	.75

HAWTHORNE WATER WORKS

Schedule of Water Rates

	<i>Consumers</i>
\$0.50 per month.....	1
\$1.00 per month.....	7
\$1.50 per month.....	4
\$2.00 per month.....	4
\$3.00 per month.....	39
\$4.00 per month.....	3
\$5.00 per month.....	5
\$6.00 per month.....	3
\$8.00 per month.....	1
\$9.10 per month.....	1
\$10.00 per month.....	1

INDIAN SPRINGS WATER COMPANY

(Rhyolite)

Schedule of Water Rates

First 1,000 gallons.....	1 cent per gallon
Next 4,000 gallons.....	$\frac{1}{2}$ cent per gallon
Over 5,000 gallons.....	$\frac{1}{4}$ cent per gallon
Minimum charge.....	\$2.00 per month
Special lawn rate (separate meter).....	$\frac{1}{2}$ cent per gallon
Minimum charge.....	\$7.50 per month

Discount, 10 per cent if paid by 10th on all but minimum accounts.

LAS VEGAS LAND AND WATER COMPANY

Schedule of Water Rates

MONTHLY RATES

Bakery.....	\$1.50
Bakery and confectionery combined.....	2.00
Barber shop, not exceeding two chairs.....	2.00
Barber shop, each additional chair.....	.50
Bathtubs, public, in hotels, boarding-houses, public buildings and blocks, barber shops, hospital, lodging- or rooming-houses, for first tub.....	1.00
For each additional tub.....	.75
Blacksmith shop, one forge.....	1.00
Blacksmith shop, each additional forge.....	.25
Bookbindery, hand.....	1.50
Brick for building, per thousand.....	.10
Butcher shop.....	1.50
Church.....	Free
Cigar manufacturer.....	1.00
Club room.....	5.00
Concrete work, per cubic yard.....	.03
Confectionery store.....	1.00
Drug store.....	1.50
Dyeing and cleaning establishments.....	1.00
Hall, public, social or dancing.....	1.00
Horse, mule or cow, private, all stock kept where connections are made, per head.....	.15

LAS VEGAS LAND AND WATER COMPANY—*Continued*

House or private residence, occupied by one family, five rooms or less.....	\$1.00
Each additional room.....	.15
Bathtub, private residence, each.....	.25
Water closet, private residence, each.....	.25
Residence occupied by more than one family, for each extra family.....	1.00
For each residence where regular family rates are paid, where lots exceed 50 feet in frontage by 150 feet in depth, there shall be an additional charge of 1c per foot for sprinkling lawns, garden or yard.	
Ice cream saloon.....	2.00
Liquor store or saloon.....	3.00
Office, bank, express, railway, attorney, physician, mining company, and other offices.....	.50
Office buildings, not to exceed 10 rooms.....	1.50
Office buildings, each additional room.....	.10
Photograph gallery.....	2.00
Plastering, per square yard.....	1 cent
Printing office.....	1.00
Restaurant.....	2.50
Soda fountain in connection with store.....	1.00
Stone work, per perch.....	.10
Store or shop.....	1.00
Urinals, public, in hotels, saloons, boarding-houses, public buildings, stores, barber shops, office buildings, hospitals, lodging-houses, or other buildings, each.....	.50
Water closets, public, in hotels, saloons, boarding-houses, public buildings, stores, barber shops, office buildings, hospitals, lodging-houses, or other buildings, each.....	.50

MANHATTAN WATER COMPANY

Schedule of Water Rates

Up to 1,000 gallons, per gallon.....	7.50 mills
1,000 to 2,000 gallons, per gallon.....	6.75 mills
2,000 to 3,000 gallons, per gallon.....	6.00 mills
Over 3,000 gallons, per gallon.....	5.25 mills

Discount, 10% if paid by the 15th.

Minimum charge, business houses.....	\$3.00 per month
Private residences.....	\$2.00 to 4.00 per month

MASON WATER, LIGHT AND POWER COMPANY

Schedule of Water Rates

FLAT RATES

Residences, without bathrooms.....	\$2.00 per month
Residences, with bathrooms.....	2.50 per month
Saloons.....	5.00 per month
Hotels.....	10.00 per month
Boarding-houses and restaurants.....	5.00 per month
Livery stable.....	5.00 per month

RENO POWER, LIGHT AND WATER COMPANY

Schedule of Water Rates

MONTHLY RATES

Lot, 50 by 140, base rate.....	\$2.00
Lot 50 by 140, with sewer connections.....	2.50
Each additional lot or fraction.....	.50
Saloons.....	3.00 to 7.00
Stores.....	1.50 to 2.50
Restaurants.....	2.50 to 6.00

RENO LIGHT AND POWER COMPANY—*Continued*

Hotels and lodging-houses	\$3.00 to 40.00
Barber shops (each tub \$1)	2.00 to 10.00
Livery stables	6.00 to 15.00
Patent water closets with other service .....	.50
Patent water closets without other service	1.00

WATER FOR SUMMER SEASON ONLY

Lot, 50 by 140	\$3.00
Each additional lot or fraction	1.00

IRRIGATION ON HIGHLAND DITCH

Per miner's inch per season of six months	\$6.00
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CONTRACTS

Reno Power, Light and Water Company with J. N. Evans. Rate per month—Water at \$2 per miner's inch per season, April 15 to October 1, yearly. Quantity to be 200 miners' inches.

RUBY HILL WATER WORKS

Schedule of Water Rates

8 mining companies	\$10.00 to \$40.00 per month
Boarding-houses, per boarder	1.00 per month
Dwelling-houses, per family	2.00 per month
Dwelling-houses, single men	1.00 per month
Each horse or cow	1.50 per month

TONOPAH SEWER AND DRAINAGE COMPANY

MONTHLY RATES

Residences	\$3.00
Bakery	5.00
Barber shop	10.00
Billiard room	5.00
Boarding-house	10.00
Brewery	10.00
Butcher shop	5.00
Candy factory	5.00
Cigar factory	5.00
Club rooms	5.00
Confectionery	5.00
Saloons	10.00
Halls	5.00
Hotels	25.00
Ice cream parlors	5.00
Laboratory	5.00
Livery stables	10.00
Offices	2.00
Photograph galleries	5.00
Restaurants	10.00
Rooming-houses, 1 to 10 rooms, per room .....	.75
Soap factory	10.00
Store	5.00
Schools and public buildings	Free

Discount, 10% if paid in advance for one year. All bills payable monthly in advance.

VIRGINIA AND GOLD HILL WATER COMPANY

Schedule of Water Rates

Family rate, in advance, per year.....	\$40.00
Family rate, in advance, half yearly.....	22.00
Family rate, in advance, monthly, for residences having sewer connections.....	4.00
Family rate, in advance, monthly, for residences having no sewer connections.....	3.00
Widows, monthly.....	2.00
Widows, yearly, in advance.....	20.00
For one person occupying house, monthly.....	1.00
Saloons, per week.....	2.00
Candy stores, per week.....	.50
Grocery stores, per week.....	1.00
Chinese laundries, per week.....	1.00
Clothing stores, per week.....	1.00
Stationery stores, per week.....	.50
Bakeries, per week.....	1.00
Restaurants, per week.....	2.00 and 2.50
Meat markets, per week.....	1.00
Barber shops, per week.....	1.00 and 1.50
Tailor shops, per week.....	.50
Dry goods stores, per week.....	1.00
Drug stores, per week.....	.50
Paint and hardware stores, per week.....	1.00
Dairies, per month.....	5.00 and 8.00
Lodging-houses and hotels, per month.....	5.00 and 12.00
Livery stables, per month.....	7.50 to 20.00
Doctors' and dentists' offices, per month.....	1.00
Undertakers' parlors, per month.....	1.00
Female boarding-houses, per month.....	2.00 to 4.00
Trucking and draying, per horse per month.....	.50
Small water-wheels for power purposes, per month.....	10.00
County Courthouse, per month.....	50.00
County Hospital, per month.....	30.00
City of Virginia, fire protection, per month.....	130.00
Town of Gold Hill, fire protection, per month.....	80.00
Town of Silver City, fire protection, per month.....	15.00
Virginia public schools, per month.....	35.00
Gold Hill public schools, per month.....	20.00
Board of Capitol Commissioners, per month.....	\$20 per miner's inch when used
I. O. O. F. Building Association, per month.....	15.00
Pioneer Laundry, per month.....	16.00
Virginia City sprinkling cart, per month.....	20.00
Virginia and Truckee Railway Company, per month.....	150.00
Truckee River General Electric Company, per month.....	54.00
United Comstock Pumping Association for pumping purposes, per month per miner's inch.....	20.00
Fire protection at hoisting works not being operated, per month.....	5.00 to 25.00
Fire protection and mining purposes at hoisting works in operation, per month.....	50.00 to 250.00
On ores assaying \$8 or less per ton, 10c per ton of ore milled.	
On ores assaying \$8 to \$15 per ton, 20c per ton of ore milled.	
On ores assaying \$15 to \$20 per ton, 25c per ton of ore milled.	
On ores assaying \$20 and over per ton, 30c per ton of ore milled.	
When used for power, 20c per ton additional.	
Per ton of tailings treated, 10c.	

CONTRACTS

- Virginia and Gold Hill Water Company with State of Nevada. Rate per month, \$20 per inch. Customers to lay pipes at own expense.
- Virginia and Gold Hill Water Company with Comstock Pumping Association. Rate per month, \$20 per inch. Minimum use, 100 miners' inches per minute.
- Virginia and Gold Hill Water Company with Yellow Jacket Gold and Silver Mining Company. Rate per month—For milling, 10c per ton of ore milled assaying \$8 or less per ton; 20c per ton for \$8 to \$15 ores; 25c per ton for \$15 to \$20 ores; 30c per ton for over \$20 ores. For cyaniding, 10c per ton additional. Customer to construct pipe line from water company flume to its mill. Quantity supplied not to exceed 20 miners' inches. Minimum charge, \$100 per month. Water to become property of water company after being used by customer.

VIRGINIA RANCH LAND AND CATTLE COMPANY
(Gardnerville)

Schedule of Water Rates

Tapping main	\$5.00
Fire plugs	\$1.00 per month
Hotels, first class	10.00 per month
Hotels, second class	8.00 per month
Hotels, third class	6.00 per month
Boarding-houses, without saloon	4.00 per month
Saloons	3.00 per month
Livery stables	12.00 per month
Stores, etc.	8.00 per month
Residences	3.00 per month

Lawn sprinkling is prohibited.

WATER COMPANY OF TONOPAH
Water Rates in Effect May 10, 1913

From 1 to 2,000 gallons	\$3.25 per 1,000 gallons
From 2,000 to 3,000 gallons	3.00 per 1,000 gallons
From 3,000 to 5,000 gallons	2.75 per 1,000 gallons
From 5,000 to 7,500 gallons	2.50 per 1,000 gallons
From 7,500 to 10,000 gallons	2.25 per 1,000 gallons
From 10,000 to 12,500 gallons	2.00 per 1,000 gallons
From 12,500 to 15,000 gallons	1.75 per 1,000 gallons
All over 15,000 gallons	1.50 per 1,000 gallons

The charge for any quantity in a given classification shall not exceed the charge which would accrue for the minimum quantity at the next lower rate.

Water shall be furnished to hospitals at rates not exceeding \$1.50 per 1,000 gallons.

Water shall be furnished for street sprinkling and volunteer fire service at rates not exceeding \$1 per 1,000 gallons.

Water shall be furnished for lawn and garden irrigation at rates not exceeding \$1 per 1,000 gallons.

Free rate to churches and schools, up to 500 gallons per month.

The minimum monthly charges shall be:

Commercial use	up to 430 gallons at \$1.50
Domestic use, 1- and 2-room houses	up to 385 gallons at 1.25
Domestic use, 3- and 4-room houses	up to 615 gallons at 2.00
Domestic use, all other residences	up to 770 gallons at 2.50

The meter deposits shall be:

For residences	\$5.00
For commercial consumers, where bills are less than \$5	5.00
For commercial consumers, where bills are more than \$5	10.00

CONTRACT RATES FOR MINING AND MILLING

Mining, \$1.50 per 1000 gallons.

Milling, 75c per 1000 gallons.

Tonopah United Water Company with Tonopah Midway Mining Company. Rate per month, \$1.50 per 1,000 gallons.

Tonopah United Water Company with Tonopah Mining Company of Nevada. Rate per month, \$1 per 1,000 gallons for milling, \$1.50 per 1,000 gallons for mining.

Tonopah United Water Company with Tonopah Extension Mining Company. Rate per month, \$1 per 1,000 gallons for milling, \$1.50 per 1,000 gallons for mining.

Tonopah United Water Company with Montana Tonopah Mining Company. Rate per month, 75 cents per 1,000 gallons for milling, \$1.50 per 1,000 gallons for mining.

WINNEMUCCA WATER AND LIGHT COMPANY**Schedule of Water Rates**

For the first 30,000 gallons per month	15c per 1,000 gals.
For the next 2,000 gallons per month	12½ per 1,000 gals.
For the next 50,000 gallons per month	10c per 1,000 gals.
Minimum per house, \$2.50.	

WONDER WATER COMPANY**Schedule of Water Rates****FLAT RATES PER MONTH**

Monarch House	\$25.00—5,000 gals. allowed
J. M. Kier	15.00—3,000 gals. allowed
J. W. Phelps	25.00—5,000 gals. allowed
J. Burns	5.00—1,000 gals. allowed
A. Jacques	5.00—1,000 gals. allowed
A. A. Smith	10.00—2,000 gals. allowed
J. C. Garriott	9.00—1,800 gals. allowed
F. M. Tannehill	5.00—1,000 gals. allowed
J. Holmes & Co.	3.50— 700 gals. allowed
L. C. Benadum	15.00—3,000 gals. allowed
Residences, including barrel service	2.50— 500 gals. allowed
Cabin service, 5-gal. can users, \$1.00 for service 4 times a week in summer and 2 times a week in winter.	

METER RATE

For the first 5,000 gallons per month	\$5.00 per 1,000 gals.
For the next 10,000 gallons per month	3.50 per 1,000 gals.
All in excess of 15,000 gallons per month	2.00 per 1,000 gals.

These meter rates to apply to the entire consumption when customers use more than the above allowances.

GAS COMPANIES**CARSON CITY COAL GAS COMPANY****Rate Schedule, Effective November 1, 1911**

Meter rates for lighting	\$3 per 1,000 cubic feet
Minimum monthly charge	\$1.00
Meter rates for domestic fuel	\$2.25 per 1,000 cubic feet
Minimum monthly charge	\$1.00
Meter rates, industrial and manufacturing purposes	\$2 per 1,000 cubic feet
Minimum monthly charge	\$2.00

NEVADA GAS COMPANY**Rate Schedule**

\$3.50 per 1,000 cubic feet. Minimum charge, \$1.
 Installation furnished at cost.
 \$10 deposit required from renters.

CONTRACTS

Nevada Gas Company (Tonopah) with Town of Tonopah. Rate per month, 50 lamps of 80 cp each at \$3 per lamp. All lamps to be lighted, extinguished and maintained by gas company.

RENO POWER, LIGHT AND WATER COMPANY**Gas Rate Schedule, Effective November 1, 1911**

(Supersedes Rates Filed June 1, 1911)

All purposes except those specified under industrial and manufacturing:

First 10,000 cubic feet.....	\$2.00 per 1,000
Next 5,000 cubic feet.....	1.50 per 1,000
Excess over 1,500 cubic feet.....	1.25 per 1,000
Minimum monthly charge.....	\$1.00

Discounts, 12½% on \$2 rate only if paid on or before 10th of month following that for which bill is rendered.

For industrial and manufacturing purposes and for hotels, restaurants, barber shops, hospitals and educational institutions:

<i>Guaranteed minimum monthly bill</i>	
\$8.00	\$1.60 per 1,000 cubic feet
\$18.50	1.35 per 1,000 cubic feet
\$27.50	1.10 per 1,000 cubic feet

Discounts, 10c per 1,000 cubic feet if paid at office on or before 10th day of month following that for which bill is rendered.

CONTRACTS

Reno Power, Light and Water Company with Overland Hotel, Reno. Rate per month, \$1.50 per 1,000 cubic feet.

**GENERAL EXPENSES OF THE PUBLIC SERVICE COMMISSION OF
NEVADA FOR THE YEAR ENDING DECEMBER 31, 1913**

Telegraph service	\$37.33
Paper and envelopes	11.20
Other stationery	22.45
Stamps	11.65
Books and periodicals	40.70
Office stenographers	1,129.35
Meter inspecting	10.00
Traveling expenses	209.85
Engineering assistants	12.50
Express charges	10.95
Bookbinding	18.00
Rent	140.00
Testing apparatus	20.00
Miscellaneous	5.60
Total	\$1,679.58

PUBLIC SERVICE COMMISSION LAW

An Act making the Railroad Commission of Nevada ex officio a Public Service Commission for the regulation and control of certain public utilities, prescribing the manner in which such public utilities shall be regulated and controlled, requiring such public utilities to furnish reasonably adequate service and facilities, prohibiting unjust and unreasonable charges for services rendered by such public utilities, providing penalties for violation of the provisions of this act, authorizing such Public Service Commission to appoint an expert engineer and to employ clerks and assistants, and making an appropriation for carrying out the provisions of this act.

[Approved March 23, 1911]

Public Service Commission Created.

SECTION 1. A public service commission is hereby created, whose duty it shall be to supervise and regulate the operations of the public utilities hereinafter named, such supervision and regulation to be in conformity with the provisions of this act.

Railroad Commission To Be Public Service Commission.

SEC. 2. The Railroad Commission of Nevada shall be, ex officio, the public service commission hereby created, and for the purposes of this act shall be known as and styled "Public Service Commission of Nevada." It shall provide itself with a seal bearing these words, by which its official acts shall be authenticated in all cases where a seal is required; and in the name, as above set forth, it may sue and be sued in the courts of the state and of the United States. The secretary of the Railroad Commission of Nevada shall act as secretary of the commission hereby created, but the business of the public service commission shall be kept entirely separate from that of the railroad commission.

Term "Public Utility" Defined.

SEC. 3. The term "public utility" within the meaning of this act shall embrace every corporation, company, individual, association of individuals, their lessees, trustees or receivers appointed by any court whatsoever, that now or hereafter may own, operate or control any plant or equipment, or any part of a plant or equipment within the state for the production, delivery or furnishing for or to other persons, firms, associations, or corporations, private or municipal, heat, light, power in any form or by any agency, water for business, manufacturing, agricultural or household use, or sewerage service whether within the limits of municipalities, towns or villages, or elsewhere; and the public service commission is hereby invested with full power of supervision, regulation and control of all such utilities, subject to the provisions of this act and to the exclusion of the jurisdiction, regulation and control of such utilities by any municipality, town or village.

Commission May Prescribe Rules of Procedure.

SEC. 4. In addition to the modes of procedure hereinafter prescribed in particular cases and classes of cases, said commission shall have power to prescribe rules of procedure, and to do all things necessary and convenient in the exercise of the powers by this act conferred upon the commission; *provided*, that nothing in this act shall be construed as vesting judicial powers in said commission, or as denying to any person, firm, association, corporation, municipality, county, town or village the right to test in a court of competent jurisdiction the legality or reasonableness of any final order made by the commission in the exercise of its duties or powers.

Charges for Utilities Must Be Reasonable and Just.

SEC. 5. Every public utility is required to furnish reasonably adequate service and facilities. The charge made by any public utility for any heat, light, water or power produced, transmitted, delivered or furnished or for any service to be rendered as, or in connection with, any public utility shall be reasonable and just, and every unjust and unreasonable charge is prohibited and declared unlawful.

Commission May Investigate All Public Utilities.

SEC. 6. The commission may, in its discretion, investigate and ascertain the value of all the property of every public utility actually used and useful for the convenience of the public. In making such investigation the commission may avail itself of all information contained in the assessment rolls of the various counties and the public records of the various branches of the state government or any other information obtainable.

All Public Utilities Must Report to Commission—Right of Examination.

SEC. 7. Every public utility shall keep and render to the commission, in manner and form prescribed by the commission, uniform and detailed accounts of all business transacted.

(a) Every public utility engaged directly or indirectly in any other business than those mentioned in section 3 of this act, shall, if required by the commission, keep and render in like manner and form the accounts of all other such business, in which case all the provisions of this act shall apply with like force and effect to the books, accounts, papers and records of such other business. The commission shall cause to be prepared suitable blanks for carrying out the purpose of this act, and shall when necessary furnish such blanks to each public utility. No public utility shall keep any other books, accounts, papers or records of the business transacted than those prescribed or approved by the commission. Each public utility shall have an office within this state, and shall keep in such office all such books, accounts, records or papers, none of which shall be removed at any time from the state except upon such conditions as may be prescribed by the commission.

(b) The accounts of all such public utilities shall be closed annually on the 30th day of June, a balance sheet taken promptly therefrom, and full annual reports of the business be made to the commission not later than the 15th day of September following the closing of the accounts. The reports shall be in such form as may be prescribed by the commission, and shall contain all the information deemed by the commission necessary for the proper performance of its duties. The commission may, at any time, call for desired information omitted from such

reports, or not provided for therein, whenever, in the judgment of the commission, such information is necessary.

(c) Any commissioner, or any person or persons authorized by the commission, shall have the right to examine the books, accounts, records and papers of any public utility, for the purpose of determining their correctness, and whether they are being kept in accordance with the rules and system prescribed by the commission.

Penalty for Failure to Make Report.

SEC. 8. Any officer, agent or person in charge of the books, accounts, records and papers, or any of them, of any public utility, who shall refuse or fail for a period of thirty days to furnish the commission with any report required by the provisions of this act, and any officer, agent or person in charge of any particular books, accounts, records or papers relating to the business of such public utility who shall refuse to permit any commissioner or other person duly authorized by the commission to inspect such books, accounts, records or papers on behalf of the commission, shall be subject to a fine of not less than one hundred dollars (\$100), or more than five hundred dollars (\$500), such fine to be recovered in a civil action upon the complaint of the commission in any court of competent jurisdiction; and each day's refusal or failure on the part of such officer, agent or person in charge shall be deemed a separate offense, and be subject to the penalty herein prescribed.

Commission to Make Annual Report.

SEC. 9. The commission shall make and publish annual reports for each calendar year showing its proceedings, which reports shall, as nearly as may be, conform in a general way to those of the railroad commission of this state, and be made at the same time. All the reports, records, accounts, books, files, papers and memoranda of every nature in the possession of the commission shall be open to the public, at all reasonable times, subject to the exception that when the commission deems it necessary, in the interest of the public, it may withhold from the public any facts or information in its possession for a period of not more than ninety days after the acquisition of such facts or information.

Commission to Fix Standards for Service—Commission May Procure Testing or Measuring Apparatus.

SEC. 10. The commission shall ascertain and prescribe for each kind of public utility adequate, convenient and serviceable standards for the measurement of quality, pressure, voltage or other conditions pertaining to the supply of the product or service rendered by any public utility, and prescribe reasonable regulations for the examination and testing of such products or service and for the measurement thereof. Any consumer, user or party served may have the quality or quantity of the product or the character of any service rendered by any public utility tested upon the payment of fees fixed by the commission, which fees, however, shall be paid by the public utility and repaid to the complaining party if the quality or quantity of the product or the character of the service be found by the commission defective or insufficient in a degree to justify the demand for testing; or the commission may apportion the fees between the parties as justice may require.

The commission may, in its discretion, purchase such materials, apparatus, and standard measuring instruments for such examinations and

tests as it may deem necessary. The commission shall have the right and power to enter upon any premises occupied by any public utility for the purpose of making the examination and tests provided for in this act and set up and use on such premises any necessary apparatus and appliances and occupy reasonable space therefor. Any public utility refusing to allow such examinations to be made as herein provided shall be subject to the penalties prescribed in section 8 of this act.

Utilities Companies Must File Schedules with Commission.

SEC. 11. Every public utility shall file with the commission within a time to be fixed by the commission, schedules which shall be open to public inspection, showing all rates, tolls and charges which it has established and which are in force at the time for any service performed or product furnished in connection therewith by any public utility controlled or operated by it. In connection with such schedule, and as a part of it, shall also be filed all rules and regulations that in any manner affect the rates charged or to be charged for any service or product. A copy or so much of said schedules as the commission shall deem necessary for the use of the public shall be printed in plain type and posted in every station or office of such public utility where payments are made by the consumers or users, open to the public, in such form and place as to be readily accessible to the public and conveniently inspected. When a schedule of joint rates or charges is or may be in force between two or more public utilities, such schedule shall, in like manner, be printed and filed with the commission, and so much thereof as the commission may deem necessary for the use of the public shall be posted conspicuously in every station or office as in this section above provided. No changes shall thereafter be made in any schedule, including schedules of joint rates or in the rules and regulations affecting any and all rates or charges except upon thirty days' notice to the commission and all such charges shall be plainly indicated, or by filing new schedules in lieu thereof thirty days prior to the time the same are to take effect; *provided*, that the commission, upon application of any public utility may prescribe a less time within which a reduction may be made. Copies of all new or amended schedules shall be filed, and posted in the stations and offices of public utilities as in the case of original schedules.

No Rebates or Discrimination in Rates Charged—Existing Contracts Not Disturbed.

SEC. 12. It shall be unlawful for any public utility to charge, demand, collect or receive a greater or less compensation for any service performed by it within the state or for any service in connection therewith than is specified in such printed schedules, including schedule of joint rates, as may at the time be in force, or to demand, collect or receive any rate, toll or charge not specified in such schedules. The rates, tolls and charges named therein shall be the lawful rates, tolls and charges until the same are changed as provided in this act. It shall likewise be unlawful for any public utility to grant any rebate, concession or special privilege to any consumer or user, which directly or indirectly shall or may have the effect of changing the rates, tolls, charges or payments, and any violation of the provisions of this section shall subject the violator to the penalty prescribed in section 10 of this

act. This, however, shall not have the effect of suspending, rescinding, invalidating or in any way affecting existing contracts.

Commission May Classify Service of Utilities.

SEC. 13. The commission may prescribe classifications of the service of all public utilities, and in such classifications may take into account the quantity used, the time when used, and any other reasonable consideration. Each public utility is required to conform its schedule of rates, tolls, and charges to such classifications, for which schedules the commission may, when necessary, prescribe the forms.

Commission May Adopt Rules Regarding Inspection, Etc.

SEC. 14. The commission shall have the power to adopt reasonable and proper rules and regulations relative to all inspections, tests, audits, and investigations, and to adopt and publish reasonable and proper rules to govern its proceedings and to regulate the mode and manner of all investigations and hearings held for the purpose of determining any question affecting public utilities; *provided*, that all such hearings shall be public.

Utilities Must Produce Accounts.

SEC. 15. The commission may require, by order to be served on any public utility in the same manner as a summons in a civil action, the production at such time and place as the commission may designate of any books, accounts, papers or records kept by such public utility in any office or place without the State of Nevada, or verified copies in lieu thereof, if the commission shall so direct, in order that an examination thereof may be made by the commission or under its direction, or for use as testimony. If any public utility shall refuse or fail to comply with such order, the said utility shall be subject to the liability named in section 8.

Expert May Be Employed.

SEC. 16. The commission shall have authority to employ an expert engineer at a salary of \$3,600 per annum and necessary traveling expenses and is invested with full power to remove such engineer whenever his services shall be unsatisfactory to the commission. The commission may employ and remove such other experts, clerks and assistants as it shall deem necessary, and fix their compensation.

Investigation of Unreasonable Charges, When.

SEC. 17. Upon a complaint made against any public utility by any mercantile, agricultural or manufacturing society or club, or by any body politic or municipal organization or by any person or persons, firm or firms, corporation or corporations, or association or associations, the same being interested, that any of the rates, tolls, charges or schedules of any joint rate or rates are in any respect unreasonable or unjustly discriminating, or that any regulations, measurements, practice or act whatsoever affecting or relating to the production, transmission or delivery or furnishing of heat, light, water or power, or any service in connection therewith is, in any respect, unreasonable, insufficient, or unjustly discriminatory, or that any service is inadequate, the commission shall proceed, with or without notice, to make such investigation as it may deem necessary. But no order affecting said rates, tolls, charges, schedules, regulations, measurements, practice or act complained of shall be entered without a formal hearing.

(a) The commission shall, prior to such formal hearing, notify the public utility complained of that complaint has been made, stating the substance thereof, or, if deemed necessary, accompanying the notice with a copy of the complaint, and ten days after such notice has been given, the commission may set a time for hearing.

(b) The commission shall give the public utility and the complainant or complainants at least ten days' notice of the time when and the place where such hearing will be held, at which hearing both the complainant and the public utility shall have the right to appear by counsel or otherwise, and be fully heard. Either party shall be entitled to an order by the commission for the appearance of witnesses or the production of books, papers, and documents containing material testimony. Witnesses appearing upon the order of the commission shall be entitled to the same fees and mileage as witnesses in civil cases in the courts of the state, and the same shall be paid out of the state treasury in the same manner as other claims against the state are paid; but no fees or mileage shall be allowed, unless the chairman of the commission shall certify to the correctness of the claim.

Disobedience of Summons Same as Contempt of Court.

SEC. 18. If any party ordered to appear before the commission as a witness shall fail to obey such order, the commission, or any member, or the secretary thereof, may apply to the clerk of the nearest district court for a subpoena commanding the attendance of said witness before the commission. It shall be the duty of such clerk to issue such subpoena, and of any peace officer to serve the same. Disobedience to such subpoena shall be deemed a contempt of court and punished accordingly.

Commission May Lower Rates, When.

SEC. 19. If upon such hearing and due investigation, the rates, tolls, charges, schedules or joint rates shall be found to be unjust, unreasonable, or unjustly discriminatory, or to be preferential or otherwise in violation of any of the provisions of this act, the commission shall have the power to fix and order substituted therefor such rate or rates, tolls, charges or schedules, as shall be just and reasonable. If it shall in like manner be found that any regulation, measurement, practice, act or service complained is unjust, unreasonable, insufficient, preferential, unjustly discriminatory, or otherwise in violation of the provisions of this act, or if it be found that the service is inadequate, or that any reasonable service cannot be obtained, the commission shall have power to substitute therefor such other regulations, measurements, practices, service or acts, and make such order relating thereto as may be just and reasonable.

(b) When complaint is made of more than one rate, charge or practice, the commission may, in its discretion, order separate hearings upon the several matters complained of and at such times and places as it may prescribe. No complaint shall at any time be dismissed because of the absence of direct damage to the complainant. The commission may at any time, upon its own motion, investigate any of the rates, tolls, charges, rules, regulations, practices, and service, and after a full hearing as above provided, by order make such changes as may be just and reasonable, the same as if a formal complaint had been made.

Depositions of Witnesses.

SEC. 20. The commission, or any party to any proceeding before it, may cause the depositions of witnesses to be taken in the manner prescribed by law for like depositions in civil actions.

Record of All Proceedings To Be Taken by Stenographer.

SEC. 21. A full and complete record shall be kept of all proceedings before the commission or its representative on any formal investigation, and all testimony shall be taken down by the stenographer appointed by the commission. Whenever any complaint is served upon the commission as hereinafter provided for the bringing of actions against the commission, before the action is reached for trial, the commission shall cause a certified copy of all proceedings held and testimony taken upon such investigation to be filed with the clerk of the court in which the action is pending.

No One Excused from Testifying on Grounds of Self-Incrimination.

SEC. 22. No person shall be excused from testifying, or from producing books and papers in any proceedings based upon or growing out of any alleged violation of the provisions of this act, on the ground of or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate or subject him to penalty or forfeiture; but no person having so testified shall be prosecuted or subjected to any penalty or forfeiture for, or on account of, any transaction, matter or thing concerning which he may have testified or produced any documentary evidence; *provided*, that no person so testifying shall be exempted from prosecution or punishment for perjury in so testifying.

Refusal to Make Reports Punished.

SEC. 23. Any officer, agent, or employee of any public utility who shall wilfully fail or refuse to fill out and return any blanks as required by this act, or shall wilfully fail or refuse to answer any questions therein propounded, or shall knowingly or wilfully give a false answer to any such questions, or shall evade the answer to any such question, where the fact inquired of is within his knowledge, or who shall, upon proper demand, wilfully fail or refuse to exhibit to any commission or any commissioners, or any person also authorized to examine the same, any book, paper or account of such public utility which is in his possession or under his control, shall be subject to the penalty prescribed in section 8 of this act.

Commission to Enforce this Act—Attorney-General and District Attorneys to Prosecute.

SEC. 24. The commission shall inquire into any neglect or violations of the laws of this state by any such public utility as hereinbefore defined, doing business therein, or by the officers, agents, or employees thereof, and shall have the power, and it shall be its duty, to enforce the provisions of this act, and report all violations thereof to the attorney-general; upon the request of the commission it shall be the duty of the attorney-general, or the prosecuting attorney of the proper, or any county, to aid in any investigations, prosecutions, hearing, or trial had under the provisions of this act, and to institute and prosecute all necessary actions or proceedings for the enforcement of this act.

All Rates and Regulations Fixed by Commission Prima Facie Lawful.

SEC. 25. All rates, fares, charges, classifications and joint rates fixed by the commission shall be enforced, and shall be *prima facie* lawful, from the date of the order until changed or modified by the commission, or in pursuance of section 26 of this act. All regulations, practices and service, prescribed by the commission shall be enforced and shall be *prima facie* reasonable unless suspended or found otherwise in an action brought for that purpose, pursuant to the provisions of section 27 of this act, or until changed or modified by the commission itself upon satisfactory showing made.

Appeal to District Court, When—Actions to Have Precedence.

SEC. 26. Any party in interest being dissatisfied with an order of the commission fixing any rate or rates, fares, charges, classifications, joint rate or rates, or any order fixing any regulations, practices or services, may within ninety (90) days commence an action in the district court of the proper county against the commission and other interested parties as defendants to vacate and set aside any such order on the ground that the rate or rates, fares, charges, classifications, joint rate or rates, fixed in such order is unlawful or unreasonable, or that any such regulation, practice, or service, fixed in such order is unreasonable. The commission and other parties defendant shall file their answers to said complaint within thirty (30) days after the service thereof, whereupon such action shall be at issue and stand ready for trial upon twenty (20) days' notice to either party.

All actions brought under this section shall have precedence over any civil cause of a different nature pending in such court, and the court shall always be deemed open for the trial thereof, and the same shall be tried and determined as other civil actions; any party to such action may introduce evidence in addition to the transcript of the evidence offered to said commission.

(a) No injunction shall issue suspending or staying any order of the commission except upon application to the court or judge thereof, notice to the commission having been first given and hearing having been had thereon; *provided*, that all rates fixed by the commission shall be deemed reasonable and just, and shall remain in full force and effect until final determination by the courts having jurisdiction.

(b) If, upon the trial of such action, evidence shall be introduced by the plaintiff which is found by the court to be different from that offered upon the hearing before the commission, or additional thereto, the court, before proceeding to render judgment, unless the parties to such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the commission, and shall stay further proceedings in said action for fifteen (15) days from the date of such transmission. Upon receipt of such evidence the commission shall consider the same, and may later modify, amend or rescind its order relating to such rate or rates, fares, charges, classifications, joint rate or rates, regulation, practice or service complained of in said action and shall report its action thereon to said court within ten days from the receipt of such evidence.

(c) If the commission shall rescind its order complained of, the action shall be dismissed; if it shall alter, modify or amend the same, such altered, modified or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon,

as though made by the commission in the first instance. If the original order shall not be rescinded or changed by the commission, judgment shall be rendered upon such original order.

(d) Either party to said action within sixty (60) days after service of a copy of the order or judgment of the court may appeal or take the case up on error as in other civil actions. Where an appeal is taken to the Supreme Court of Nevada the cause shall, on the return of the papers to the higher court, be immediately placed on the calendar of the then pending term, and shall be assigned and brought to a hearing in the same manner as other causes on the calendar.

(e) In all actions under this act the burden of proof shall be upon the party attacking or resisting the order of the commission to show by clear and satisfactory evidence that the order is unlawful, or unreasonable, as the case may be.

Notice of Serious Accidents to Persons Given Commission.

SEC. 27. Every public utility shall, whenever an accident occurs in the conduct of its operation, causing death or personal injuries, give immediate notice thereof to the commission. If in its judgment the public interest requires it, the commission shall cause an investigation to be made forthwith, at such place and in such manner as the commission shall deem it best.

Penalties for Public Utility Violating this Act.

SEC. 28. If any public utility shall violate any provision of this act, or shall do any act herein prohibited, or shall fail, or refuse to perform any duty enjoined upon it, or upon failure of any public utility to place in operation any rate or joint rate, or do any act herein prohibited, for which a penalty has not been provided, or shall fail, neglect, or refuse to obey any lawful requirement or order made by the commission or any court, for every such violation, failure or refusal, such public utility shall be subject to the penalty prescribed by section 8 of this act.

All Reports to Commission Must Be Sworn To.

SEC. 29. Every annual report, record or statement required by this act to be made to the commission shall be sworn to by the proper officer, agent or person in charge of such public utility. Any intentionally false oath as to the correctness of such report, record or statement, shall be deemed perjury, and the person making such false oath shall, upon conviction, be punished as in the case of other perjuries.

Suits at Law—Attorney-General to Represent Commission.

SEC. 30. Any forfeiture or penalty herein provided shall be recovered and suit thereon shall be brought in the name of the State of Nevada in the district court of any county having jurisdiction of the defendant. The attorney-general of Nevada shall be the counsel in any proceeding, investigation, hearing or trial, prosecuted or defended by the commission, as also shall any prosecuting attorney selected by said commission, or other special counsel furnished said commission in any county where such action is pending.

Mandamus, When.

SEC. 31. In addition to all the other remedies provided by this act for the prevention and punishment of any and all violations of the provisions thereof, and all orders of the commission, the commission may

compel compliance with the provisions of this act and of the orders of the commission by proceedings in *mandamus*, injunction, or by other civil remedies.

Printing for Commission.

SEC. 32. Except in cases of emergency, all the necessary printing of the commission shall be done at the state printing office, and it is made the duty of the state printer to have such printing done as expeditiously as possible.

Traveling and Other Expenses.

SEC. 33. The commission and secretary, and such clerks and experts as may be employed, shall be entitled to receive from the state their necessary expenses while traveling on the business of the commission, including the cost of lodging and subsistence. Such expenditure shall be sworn to by the person who incurred the expenses and be approved by the chairman of the commission.

Each Section Independent of All Others as Regards Constitutionality.

SEC. 34. Each section of this act and every part of each section are hereby declared to be independent sections and parts of sections, and the holding of any section or part thereof to be void or inoperative for any cause shall not be deemed to affect any other section thereof.

Appropriation.

SEC. 35. For the purpose of carrying out the provisions of this act, the sum of \$5,000, exclusive of the amount named as the salary of the engineer, is hereby appropriated out of any moneys in the treasury not otherwise appropriated.

RULES AND REGULATIONS FOR GAS AND ELECTRIC SERVICE IN THE STATE OF NEVADA

RULE 1

A meter may be considered as correct, if, when passing gas at the rate of six cubic feet per hour per light capacity, it shows, in comparison with a standard gas-prover, an error which is not greater than 2 per cent.

RULE 2

No gas company shall allow a gas meter to remain in service for a period longer than three years without checking it for accuracy and readjusting it if found to be inaccurate.

RULE 3

Each company shall keep a record of all tests made on meters both before installation and while in service.

RULE 4

Each gas company shall provide itself with equipment necessary for testing meters, such equipment to consist of a standard meter prover with suitable accessories.

RULE 5

Each gas company shall make a test of the accuracy of a meter upon request of a consumer, provided such consumer does not make a request for tests more frequently than once in six months. A report giving the results of such tests shall be made to the consumer, and a complete record of such tests shall be forwarded to the Public Service Commission.

RULE 6

Upon formal application of any consumer to the Public Service Commission a test shall be made upon the consumer's meter by an inspector employed by the commission, such test to be made as soon as practicable after receipt of the application. For such a test a fee of one dollar and fifty cents (\$1.50) shall be paid by the consumer making the application for the test if the meter is found to be slow or correct within the allowable limits, and by the company owning the meter if the meter is found to be fast beyond the allowable limit.

RULE 7

Meter dials shall read directly in cubic feet of gas, and bills rendered periodically by the company shall designate the readings of the meter at the beginning and end of the time for which the bill is rendered, and give the dates at which the readings were taken.

RULE 8

The company furnishing gas, which, within a one-mile radius from the distribution center, gives a monthly average total heating value of not less than 550 B.T.U., with a minimum which shall never fall below 500 B.T.U., may be considered as giving adequate service as far as the heating value of the gas is concerned.

RULE 9

Each gas company, whose output exceeds five million cubic feet a year, shall equip itself with a standard calorimeter outfit, with which periodic tests upon the gas shall be made. A record of these tests shall be kept open for public inspection.

RULE 10

Gas pressure, as measured at meter inlets, shall never be less than $1\frac{1}{2}$ inches nor more than 6 inches of water pressure; and the daily variation of pressure at the inlet of any one meter on the system shall never be greater than 100 per cent of the minimum pressure.

RULE 11

Each company shall make frequent measurements of the pressure and pressure variations, and these shall be kept on record and open for public inspection.

RULE 12

In no case shall the gas contain more than thirty grains of total sulphur per 100 cubic feet, and not more than a trace of sulphur as sulphuretted hydrogen.

RULE 13

Each company shall keep a record of complaints which shall include the name and address of the consumer, the date, the nature of the complaint, and the remedy. A classified summary of these records shall be submitted to the commission on or before the 30th day of each month for the preceding month.

RULE 14

No electric meter which registers upon "no-load" shall be placed in service nor allowed to remain in service.

RULE 15

No electric meter shall be placed in service nor allowed to remain in service which has an error of registration in excess of 2 per cent on normal operating load or 3 per cent on a load of one-tenth the rated capacity of the meter.

RULE 16

Each electric service meter shall be tested and adjusted for accuracy at the time of its installation.

RULE 17

Each electric service meter shall be tested at least once a year; the test to be made by comparing the meter while connected in its place of service with suitable standards, on normal operating load, and on 10 per cent of its rated capacity.

RULE 18

A complete record shall be kept of all tests made on electric meters.

RULE 19

Each company supplying electric energy shall provide itself with suitable equipment for the testing of meters, and shall employ such methods as are approved by the Public Service Commission.

RULE 20A (Canceling Rule 20)

Each company supplying electrical energy shall make a test of the accuracy of a meter upon request of a consumer, provided such con-

sumer does not make request for tests more frequently than once in six months. Such test shall be made in the presence of consumer, with meter connected in its place of service, and such meter shall not be uncovered for adjustment until settlement of complaint is made. A report giving the results of such tests shall be made to the consumer, and a complete record of the same shall be forwarded to the Public Service Commission.

RULE 21

Upon formal application of any consumer to the Public Service Commission, a test shall be made upon the consumer's meter by an inspector employed by the commission, such test to be made as soon as practicable after the receipt of the application. For such a test a fee of one and one-half dollars (\$1.50) shall be paid by the consumer making application for the test if the meter is found to be slow or correct within the allowable limit, and by the company owning the meter if the meter is found to be fast beyond the allowable limit.

RULE 22

Each company supplying electrical energy shall maintain a record of all interruptions of service upon the entire system or major division of its system, and include in such record, time, duration, and cause of each interruption.

RULE 23

Each company supplying electrical energy on constant potential systems shall adopt and maintain a standard average voltage as measured at any consumer's cut-out, which shall remain constant from day to day, and vary during any one day by an amount not more than 6 per cent of the minimum value.

RULE 24

Each company supplying electrical energy for incandescent illumination shall, upon request, specifically inform its consumers as to the conditions under which efficient and economical illuminating service may be secured from its system.

RULE 25

Bills shall be rendered monthly by the electric company and shall designate the readings of the meter at the beginning and end of the time for which the bill is rendered, the amount used during the month, and the dates at which readings were taken.

RULE 26

Gas and electric companies shall furnish printed instructions as to the method of reading meters, and post copies of the same in a conspicuous place near the meter. They shall also have their meter readers instruct all customers in the correct method of reading their meters, and shall have their meter readers present to customers at the time meter is read a duplicate record of his reading, which shall give the present reading, the previous reading, the consumption for the month just passed, the consumption for the previous month, and the dates of the readings.

[Rules 1 to 24 inclusive, were adopted June 3, 1911, and went into effect September 3, 1911. Rules 20A, 25 and 26 were adopted September 12, 1911, and went into effect October 15, 1911.]

SAFETY REGULATIONS FOR ELECTRIC UTILITIES

[Adopted December 2, 1911]

The following regulations are issued for electric utilities in this state, for the purpose of protecting the lives of employees and securing greater safety for the public:

GENERAL RULES

1. All generators and motors operating at a potential above 500 volts shall have their base frames permanently and effectively grounded and be provided with name-plates giving their normal voltage and speed.

2. All switchboards controlling lines operating at a potential above 500 volts shall have suitable insulating platforms or rubber mats placed in front of them, and extending the whole length of the board.

3. The casings of all power and lighting transformers within power stations and substations shall be permanently and effectively grounded.

4. Transformer secondaries of distributing systems for lighting service shall be grounded in such a manner as to prevent a fatal accident in case the primary and secondary come in contact with each other.

5. Foremen shall be instructed to see that safety belts are used by all linemen when they are working on poles or other structures.

6. No employee in any department shall be allowed to go on shift if he reports for duty in such physical or mental condition that his personal safety or the safety of others may be endangered by assuming his duties in such condition.

7. No employee in any department shall be allowed to work under such conditions that his personal safety or the safety of others may be endangered, due to his incompetence or inexperience.

HIGH-TENSION SYSTEMS

8. All electric utilities operating systems at pressures above 5,000 volts shall prepare regulations for the protection of their employees, such regulations to be printed and issued to each employee.

9. The printed regulations shall show plainly the organization of the company so that each employee may know what are his own duties and responsibilities and the duties and responsibilities of each official of the company.

10. "Resuscitation from Electric Shock" rules shall be posted, and boxes with first-aid medical supplies shall be maintained in all company power houses, substations, and patrol houses.

11. All employees shall be instructed in the treatment for electric shock.

HIGH-TENSION POWER STATIONS

12. No work shall be done on apparatus or structures where the workman's person is necessarily nearer to any part unprotected under

voltage than the distances specified below, and for intermediate voltages proportional distances:

- On 100,000-volt lines or apparatus.....6 feet
- On 60,000-volt lines or apparatus.....4 feet
- On 20,000-volt lines or apparatus.....3 feet
- On 5,000-volt lines or apparatus.....2 feet

13. No visitors shall be allowed in a high-tension power station or substation unattended. They must be conducted by a station attendant or other employee.

14. All lines or apparatus shall be grounded and short-circuited after being disconnected from the source of voltage, before work may be done on such parts, or at a distance from them less than that specified in 12.

HIGH-TENSION STATION OPERATORS

15. Station and substation operators shall keep a log-book or report, showing when lines entering or leaving their respective stations are cut in or cut out, and as far as possible the reason such cut-in or cut-out occurred.

16. The retiring operator shall call the attention of the relieving operator to any unusual conditions of the station. Upon taking charge the relieving operator shall make an inspection of the station apparatus and then sign the log-book or report in acknowledgment of his being familiar with the conditions at the station.

17. When any line is cut out at the station in order to permit work being done on it, the operator shall place on the switch which controls said line the sign "Men on Line," and shall put a note on the sign stating by whose orders the line was killed and by whose orders the line shall again be put into service. This record shall also be shown on the station log-book or report.

18. In every case where an order is received by telephone or verbally it must be repeated back to the person giving the same and the repetition acknowledged by the person giving the order before permitting men to work on a line.

HIGH-TENSION LINE OPERATION

19. The operation of all high-tension lines shall be in charge of a chief operator or district foreman who shall issue orders for the operation of all disconnecting and oil switches, fuses at branch-line taps, killing lines for repair or other work on lines and in substations.

20. Blocking devices shall be used to prevent the closing of disconnecting switches and circuit breakers, and plainly printed signs "Men on Line" shall be hung on controlling switch in all cases where men are working on high-tension lines.

21. All lines and apparatus shall be considered as under voltage at all times, and no work shall be done except in accordance with the following rules:

First—The man in charge of the work shall ask for the line or apparatus in person or by telephone to the station or stations controlling the line, stating the nature of the work to be done.

Second—After the station operator has the section of line or apparatus killed and protected by open disconnecting switches, he shall record the name of the man who has called for the line on the log-sheet or report.

Third—The operator shall then tell the man in charge of the work that the line is dead, and that it will be kept dead until he reports either in person or by telephone that he is clear.

Fourth—When the work has been completed the man who called for the line shall report clear to the station or stations at which he was marked up, either by telephone or in person. The operator shall then mark the time of clearing on the log-sheet or report.

22. Line-disconnecting switches must always be regarded as being under voltage and handled accordingly.

HIGH-TENSION LINE REPAIRS AND MAINTENANCE

23. No foreman, patrolman, lineman or other person shall be permitted to do any work on a high-tension line without first receiving a statement from the chief operator that the line is dead and grounded and will be kept so until clearance is received.

24. Having received assurance that the line is dead is not sufficient protection, and the workman shall be cautioned to do no work until he tests with grounded wire the line to be worked on.

The method of grounding the line at stations shall be as follows:

Cables of sufficient length and with a carrying capacity equal to the line shall be provided. Carefully ground one end of the cable, then attach the grounded wire to the conductor to be grounded in such a manner as to make good contact and a good ground.

Ground each conductor separately in the same manner, and if the line can be made alive at more than one point, or where other high-tension lines closely parallel or cross the line to be worked on, then both ends of the line must be grounded. When the work is finished, first detach the ground cables from the lines before disconnecting from the ground.

25. High-tension lines should not approach other pole lines which parallel them nearer than a distance equal to the height of the taller pole line. High-tension lines should not be on the same pole with other wires (except signal or telephone wires used by the company operating the high-tension system).

26. High-tension lines must not be carried so near buildings as to interfere with or endanger the lives of firemen when in the performance of their duties.

27. Trees should not be permitted to stand within striking distance of high-tension lines should they fall toward the line.

TELEPHONE LINES

28. Branch lines may be run to residences, offices or other buildings from a private telephone line which is on the same poles with a high-tension system, but in all such cases such branch lines must be protected by fuses and ground protectors. Such branch lines, however, shall not be permanently connected to the main telephone line, but connection must be made to same by attendant at substation or power station when required and always disconnected when not in use.

29. Insulated platforms should be placed beneath all such telephones in offices, residences, substations, and power stations to protect the users of same.

30. No telephone wires shall be strung on high-tension pole lines while the high-tension lines are under voltage.

HIGH-TENSION LINE CROSSINGS

31. In all cases where high-tension lines cross other lines, some method of protecting the low-tension lines must be adopted. One of the methods suggested in the "National Electric Code" for 1911, Rule 13, or some other method equally as good, will be accepted.

32. When 1,000 to 5,000-volt feeder lines are carried on the same poles with low-tension distributing lines, service wires and telephone wires, the former shall be placed at least three feet above the other lines.

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SEVENTH ANNUAL REPORT
OF THE
RAILROAD COMMISSION
AND
FOURTH ANNUAL REPORT
OF THE
PUBLIC SERVICE COMMISSION

1914

H. F. BARTINE - - - - - **Chief Commissioner**
J. F. SHAUGHNESSY - **First Associate Commissioner**
W. H. SIMMONS - **Second Associate Commissioner**
E. H. WALKER - - - - - **Secretary**
W. K. FREUDENBERGER - - - - **Chief Engineer**



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : : **JOE FARNSWORTH, SUPERINTENDENT**

1915



SEVENTH ANNUAL REPORT

OFFICE OF THE RAILROAD COMMISSION OF NEVADA,
CARSON CITY, NEVADA, February 1, 1915.

HON. EMMET D. BOYLE, *Governor of Nevada.*

SIR: The Railroad Commission of Nevada submits this, its seventh annual, report of its work, the same being for the year 1914.

The law requires that the report of the Commission shall be filed as soon as practicable after the close of each year. In order to make the report comprehensive and complete, some time must necessarily elapse after the 31st day of December, before the report can be filed. This year various matters of regular commission work, together with the removal of the Commission's office into the State Capitol Building, have operated to delay the completion of the report.

Apart from routine work which necessarily increases as time goes on, the Commission has given consideration to 26 cases which were pending at the beginning of the year 1914; it has also received and acted upon 44 specific complaints filed since that time. Some of these cases were of minor consequence, and some were highly important. Some have been fully disposed of, and some are still pending. A detailed statement of the various cases referred to will be given in subsequent pages of this report.

THE RENO CASE

It is a matter of regret to the Commission that with each recurring year reference has to be made to what is popularly known as the "Reno Case." This is due to the fact that the case is one over which the Nevada Commission has no direct jurisdiction, and in which definite and final results must come from the action of the Interstate Commerce Commission. In our last annual report we gave a sufficiently full statement of this case, and we do not feel that we should repeat anything that was there stated, except as it may be necessary to make clear the present status of that case, which is of an importance to the people of this State that can scarcely be overestimated.

It has been previously explained that upon the amendment of the fourth section of the Interstate Commerce Law in 1910 all the great transcontinental railroads reaching the Pacific Coast almost immediately made application to the Interstate Commerce Commission for complete relief from the operation of the "long-and-short-haul" clause contained in that section. These proceedings constituted what are known in the records of the Interstate Commerce Commission as the "Fourth-Section Cases." At the time these applications were made, what is known as the "Reno Case," the "Spokane Case," the "Salt Lake Case," and the "Phoenix Case" were pending before the Interstate Commerce Commission. In all of these cases a large measure of relief had been granted by the Commission, and also by voluntary concessions on the part of the railroads, which concessions, it may be remarked in passing, were tendered upon compromise principles, and in the hope of securing a dismissal of the

so-called intermountain cases, the "Reno Case" being one of them. Those in charge of the Spokane case showed a disposition to accept certain concessions from the railroads, and dismiss the case. The Nevada Commission, together with the representatives from Arizona, Utah, and Southern California, declined to do so.

Upon the filing of the fourth-section applications mentioned above the intermountain cases were, in a sense, consolidated with those applications, and all of them were considered together at an exhaustive investigation held in Washington in March, 1911. That hearing covered a period of two weeks. Instead of granting the railroad carriers complete exemption from the "long-and-short-haul" clause, which would have put an end to the Reno case, the Commission made and entered orders allowing the railroad carriers certain limited exemptions. The custom had been for the carriers to charge at interior points the full rates to the coast, plus the local charges back to the point of consignment. In the Reno case it was shown that this custom had the effect of making the charges upon westbound transcontinental traffic about 73 per cent higher than the average charges upon the Southern Pacific System, as a whole. The fourth-section orders of the Interstate Commerce Commission provided that from Missouri River territory to Reno, Winnemucca, Elko, Spokane, Phoenix, and other intermountain points, the charges should be no higher than those to the coast terminals; that from Chicago territory the charges to intermountain points should not exceed the coast charges by more than 7 per cent; from Pittsburg-Buffalo territory that the charges should not be more than 15 per cent higher to intermountain points than to the coast, and that from the Atlantic seaboard the differential should not exceed 25 per cent. It has already been shown in these reports that about 75 per cent of the goods received in Nevada comes from Chicago territory and points west, and not more than 10 or 12 per cent from that section which is known as the Atlantic seaboard territory. Hence, it appears that had the fourth-section orders gone into effect, the average differential against the intermountain territory would have been reduced from something like 73 per cent to not more than 10 per cent, while the substantial results would have been still better for the intermountain territory, because of the fact that the great bulk of the traffic into this section originates not much farther east than the city of Chicago. The natural tendency of the orders would have been to move those productive industries along the Atlantic seaboard, from which we now receive goods, farther and farther west in order to get the benefit of the more advantageous rates, and consequently the proportion of our goods received from the extreme eastern section of the country would naturally become less as time went on. This would be in accordance with sound business principles, for it is self-evident that the shorter the distance commodities must be transported from where they are produced to where they are to be used the better it is for all concerned except the transportation companies, which are always desirous to secure the longest possible haul.

Not satisfied with the percentages of exemption granted by the Interstate Commerce Commission, the railroad carriers brought an injunction suit against the Commission in the Commerce Court, which court held that the orders were void. The Commission then appealed the case to the Supreme Court of the United States. In that tribunal the cases were held in abeyance for about a year and a half. Since our last annual report was written, a decision has been rendered by the Supreme

Court of the United States sustaining the orders as made by the Interstate Commerce Commission. Very promptly the railroad carriers then made a new application to the Interstate Commerce Commission for relief. A petition was filed setting forth a large number of commodities upon which it was claimed additional relief was necessary by reason of the increasing effect of water competition through the Panama Canal. Upon this latter petition a hearing was held in Chicago, Ill., on October 6, 7, 8, 9, 10, and 11, before Examiner Henry Thurtell, formerly a member of this Commission. The importance of this case to Nevada was such that it was deemed wise to make the strongest showing possible, and accordingly the entire Commission, with the Secretary, went to Chicago and took part in the hearing. Commissioners Shaughnessy and Simmons and Secretary Walker all introduced testimony, while the Chief Commissioner acted as general counsel, not only for Nevada, but for the greater portion of the intermountain country, including the States of Idaho, Montana, Utah, New Mexico, and Arizona, as well as the southeastern portion of the State of California.

After the hearing an elaborate brief was filed on behalf of the Nevada Commission, which was joined in by the Public Utilities Commission of Idaho, and still later, on November 23, the Chief Commissioner went to Washington, D. C., where he argued the case orally before the Interstate Commerce Commission, which sat for the purpose of the argument with all of its members present. At this writing no decision has been rendered. The members of this Commission do not feel that the railroad carriers made any showing whatever that would justify the Interstate Commerce Commission in modifying the orders as originally made. In fact, it is our judgment that the original fourth-section orders themselves gave to the carriers more than any evidence which they introduced entitled them to. We are awaiting the final decision of this case with the firm belief that such decision should be adverse to the railroad carriers and in favor of the position which has been taken by this Commission, and all of the other intermountain States and Territories, from the beginning.

FRUIT AND VEGETABLE CASE

In our last annual report mention was made of what is known as the fruit and vegetable case, numbered 250. Secretary Walker, by his examination of an amended tariff filed with the Commission, discovered that fruits and vegetables had been taken out of a lower class and placed in a higher one, thus increasing the charges thereon. It was a matter of great importance to the people of this State, and protest was promptly made to the Interstate Commerce Commission, which Commission suspended the new schedule until the matter could be investigated. The case was heard in the city of Sacramento. Commissioners Bartine and Simmons and Secretary Walker were in attendance. The principal and most important testimony was prepared and presented by Secretary Walker. Later, the Interstate Commerce Commission handed down its decision, fully sustaining the contentions made by this Commission and refusing to allow the reclassification. At the hearing the fact was developed that the change of classification increased the charges to one house doing business in Reno amounting to an increase of nearly \$3,000 per annum in freight rates. Upon the most conservative estimate the total amount saved to the State of Nevada can scarcely be less than \$20,000 per annum, and it may very considerably exceed that sum.

THE RUBY HILL BRANCH CASE

A case to which the Commission gave a great deal of labor and thought was No. 243. This proceeding was brought by the Richmond-Eureka Mining Company against the management of the Eureka-Nevada Railway, operating between Palisade and Eureka, in Eureka County of this State. A branch line some four miles in length had been constructed many years after the building of the main line; this branch line extended from the main line to the mines on Ruby Hill. In 1910 the road was washed out by a flood and only resumed operations after a lapse of about two years. Upon the Ruby Hill branch operations were not resumed at all, a part of the line being torn up and the material used to repair the main line. The Richmond-Eureka Mining Company applied to the Commission for an order requiring the management of the road to rehabilitate the Ruby Hill branch. The first view of the Commission was that such order might lawfully be made. But after a most careful and painstaking consideration of the whole matter, the conclusion was reached that the Commission had not jurisdiction to order the reconstruction of an abandoned branch line constructed and situated as this one was; and, further, that, even had the Commission the jurisdiction to make such order, the showing on the part of the petitioner was not sufficient to justify it. Accordingly the petition was dismissed.

VERDI DEPOT

In our last report mention was also made of the Verdi Depot case. The depot facilities at that point were alleged to be altogether inadequate, consisting simply of a box car or two located more than two thousand feet from the heart of the town, in a most inconvenient and almost inaccessible locality. At the hearing which took place in Verdi, and which was participated in by the entire Commission, as well as representatives of the Southern Pacific Company, the defendant, it was agreed that a suitable depot should be erected upon a site mutually agreed upon by all parties, near the center of the town. It is a pleasure to be able to report that the depot has been completed and that it is a handsome and commodious building, greatly improving the appearance of the town and adding much to the comfort of the traveling public.

THE PULLMAN DRAWING-ROOM CASE

Another case which is deemed of sufficient importance to be mentioned in these preliminary pages is No. 272, relating to charges made to passengers using drawing-rooms and compartments in Pullman cars. The railroad carriers operating Pullman sleepers within the State of Nevada and elsewhere had established the custom of requiring a single passenger occupying a single drawing-room to provide himself with two full first-class railroad tickets, or the equivalent of the same, while one occupying a compartment must have one full fare and at least one half-fare ticket in order to entitle him to use such compartment. This custom had been complained of to the Commission, and was considered by them both as an interstate and an intrastate question. It was felt that it would be wiser to first bring the proceeding before the Interstate Commerce Commission, and get the ruling of that body. Accordingly, a complaint was duly filed against the Southern Pacific Company, and many other carriers, including the Pullman Company itself. The view of the Commission was that the custom or regulation referred to was unreasonable and

not justified by traffic conditions. The hearing took place at Reno before Examiner Wood. The case for this Commission was made by the Commission itself, with the Chief Commissioner and the Attorney-General acting as counsel. In a financial way the matter is not so important to the people of this State, but the question of principle is. The Nevada Commission filed its opening brief in the matter, as prescribed by the Interstate Commerce Commission, and the final brief will be filed, if one is deemed to be necessary, on or before the 10th day of February. In this connection it may be remarked that both the Railroad Commission of California and that of the Dominion of Canada have strongly condemned the regulation complained of in this proceeding.

SOUTHERN PACIFIC PASSENGER FARES

Next to the Reno case, involving freight rates, the most important single case with which this Commission is now dealing is the one relating to passenger fares on the Southern Pacific Company's lines in Nevada. This same matter was before the Commission in the year 1913. An order had been made in the case, which order was contested by the Southern Pacific Company in the United States District Court for Nevada. The court held that the order, upon which the members of the Nevada Commission were divided, was void, because of certain errors in procedure. Accordingly the case was dismissed, and on May 12, 1914, a new proceeding was begun by the Commission upon its own motion. In this case two hearings have been held, and it is possible a third one may be necessary in order that the matter in controversy may be fully covered. Necessarily, the case is a most important one, and the Commission feels that it should be made up with the utmost care. It is believed, though, that it will be fully completed at an early day, and ready for decision.

CONSOLIDATION OF THE LAS VEGAS AND TONOPAH AND THE BULLFROG-GOLDFIELD RAILROADS

A matter which seems to be of sufficient importance to receive special mention in this part of the report is that of the consolidation of the Las Vegas and Tonopah and the Bullfrog-Goldfield Railroads, in Esmeralda and Nye Counties. These roads were constructed with the object of connecting Tonopah and Goldfield with the Bullfrog Mining District, and also with the town of Las Vegas, situated upon the San Pedro, Los Angeles and Salt Lake Railroad. The reports of the two companies on file with the Commission indicate that there never was sufficient business to justify the construction of both of these roads, which, in a general way, parallel each other between Goldfield and Beatty. With the depression which settled upon Goldfield in 1907, the business of the two roads steadily decreased, while it was impossible to make any corresponding reduction in the operating expenses. Therefore, on January 22, 1914, a petition was received by the Commission stating that it was proposed to consolidate the Bullfrog-Goldfield Railroad with the Las Vegas and Tonopah, and asking the consent or approval of this Commission to such consolidation.

The matter as thus presented was not strictly within the jurisdiction of the Commission. Its approval was sought by the management of the two railroads merely for its moral effect. In order that the people living along the lines of the two roads might be given an opportunity to express their views in the matter, notice was published in the Tonopah Bonanza.

and the Goldfield Tribune, stating in full the purpose and general nature of the proposed consolidation, and setting a time for the formal hearing of the application at the office of the Commission in Carson City, Nevada. No objection whatever was made by any one, and the hearing took place at the stated time. Being satisfied that one good road was better than two poor ones, and that unless the consolidation took place both might be and perhaps would be abandoned, the Commission gave its formal consent in an opinion which is published elsewhere.

Later, citizens of Rhyolite and also the grand jury of Nye County complained by letter and by telegrams to the Commission of a suspension of regular railroad service to Rhyolite. In giving its consent to the consolidation, the Commission made it a condition that points being served by the two railroads should continue to receive service. This, of course, meant such reasonable service as could be given under the changed conditions. Obviously, when the two roads were combined and portions of each were so used as to form one continuous line, points located upon the abandoned portions could not possibly receive the same service that they did before. This was the trouble at Rhyolite. It was one of the points cut off from the direct line. The correspondence concerning the matter was quite voluminous, the people of Rhyolite apparently feeling strongly that they were being subjected to injustice. That was not at all surprising, nor could they be blamed. Naturally enough, the people of every community desire the best railroad service they can get, and when the regular service at Rhyolite was discontinued, the people of that town were undoubtedly subjected to considerable inconvenience, if not actual hardship.

The Commission took the matter up with the management of the Las Vegas and Tonopah road, which was in control, and in the end arrangements were made by which there should be a semiweekly service between Beatty, on the main line, and Rhyolite, which was on a spur and distant some eight or ten miles. Since this arrangement was made we have heard nothing more from the people of Rhyolite, and we are bound to assume that they accept the service as being as good as can be rendered under the changed conditions. It appeared from the showing made by the railroad company that the population of Rhyolite was very small, and the business correspondingly so; that, from a standpoint of good railroading, it would be impracticable to render a daily service between Beatty and Rhyolite; that the business would not justify the running of a separate train, and if the main-line train were held at Beatty while the run was being made to Rhyolite, it would involve the company in very considerable loss, both in time and money. It is a matter of regret to the Commission that business conditions both at Goldfield and in the Bullfrog district have become so depressed as to make this consolidation necessary.

But it is a subject over which we have no actual control, and, in the absence of any counter-showing by the people living in those places along the lines of the two roads, the Commission could not do otherwise than to accept the showing made by the railroads, and especially so as the evidence furnished at the hearing was in harmony with the facts set forth in the annual reports of the two companies on file with the Commission. It seems to have been a case of overenthusiasm in railroad building. At the time the two roads were projected, mining conditions in both Goldfield and Bullfrog districts were in the highest degree favora-

ble, and doubtless those who engaged in the building of the roads and invested their money had full confidence in the permanence of those favorable conditions. They were disappointed, as is clearly shown by the foregoing statement. We have some reason to believe that, with the revival of the mining industry now taking place in the Bullfrog district, the consolidated road will be able to do a fairly good business, and at the same time render much better service to its patrons than could be rendered by the two roads competing with each other, and each doing business at a loss.

GENERAL RESULTS

It is unnecessary to take up for special reference any of the other cases which the Commission has had under consideration during the last year. They are given with sufficient particularity later on in this report, and in some of the more important ones the opinion and order of the Commission are given in full.

Upon the whole, the work of the Commission has produced fairly satisfactory results during the past year, and it can be stated with assurance that transportation conditions throughout the State have been very materially improved. Without going into detail, it may be observed that as a result of the efforts of the Commission, sometimes in formal proceedings, and at others informally, by the Commission as a whole or through the efforts of individual Commissioners, the larger business houses of the State are now doing a considerable business which two or three years ago was impossible. For example, Reno at this time is selling goods all along the line of the Nevada-California-Oregon Railway as far north as Lakeview, Oreg. The Reno merchants are also in good position to either control or substantially share in the distributing trade as far south as Tonopah and Goldfield. Case No. 296, affecting class rates between Reno at the north and Tonopah and Goldfield at the south, resulted in a blanketing of the rates from Reno to the two southern towns named. The opinion in this case is given later.

The reductions of transportation rates range from \$2.60 to \$5.80 per ton on all class rates from Reno to Goldfield and Tonopah, and with corresponding reductions at intervening points.

THE COMMISSION'S WORKING FORCE

It is but simple justice to direct attention to the admirable character of the service rendered by the Commission's subordinates. The work of the Engineer and the Secretary has been in the highest degree satisfactory. It is needless to say that this work is of the utmost importance to the Commission. With regard to technical questions of engineering the Commission must of necessity to a very great extent rely upon its Engineer. Under the law there is no Engineer of the Railroad Commission, but Mr. Freudenberger, the Engineer of the Public Service Commission, has been formally appointed without additional compensation to the position of Engineer for the Railroad Commission. In this capacity he has rendered and is still rendering valuable service along engineering lines, furnishing the Commission with valuable data upon which it bases decisions affecting rates.

The Secretary, Mr. E. H. Walker, has been with the Commission from its creation, has grown up with it, so to speak, and his work has been about as nearly faultless as it very well could have been. Reference has previously been made to the very special service which he rendered in

the fruit and vegetable case. In this matter, the change of classification might easily have escaped the notice of an official less acute and less attentive to the details of his official work. The net result was a saving to the State annually of an amount about eight times his own salary. Such service should be fittingly recognized. The people of the State cannot reasonably expect to receive first-class service at second-class salaries.

The remainder of the working force has been loyal and efficient, always quick to respond to any request for additional service when required. In this connection it should be borne in mind that the work of the clerical force of the Railroad and Public Service Commissions is not strictly routine, but is of a character to call for no small degree of original thought and initiative action. The work of the Commission, in its very nature, provokes controversy and contest. Any action which it may take in the way of reducing rates or imposing additional obligations upon railroads or other public utilities is usually, or at least frequently, met by contest in court. In all such cases the Commission is obliged to meet the best legal and the best expert talent that the great public-service corporations can command. Clearly this cannot be done successfully with an inferior working force, and it can be seen at a glance that the character of work required by the Commission of its subordinates is very different from that which is performed by the clerical force of the other departments of the State Government. The work of the Commission is both administrative and judicial in character, and many of its cases call for an investigation of problems both scientific and abstruse. Then, as before intimated, the matter is not infrequently carried into the courts and the work devolves upon the Commission to defend its order.

The Commission feels justified in pointing to the fact that except in the Reno case, involving the so-called back-haul charge some six years ago, it has not found it necessary to secure the services of a single expert witness, but has made up its cases entirely with its own office force.

EXPENSES

The Railroad Commission, which is ex officio Public Service Commission of this State, is, compared with similar commissions in other States, a very inexpensive one. According to the best estimates that we are able to make, the Railroad and Public Service Commissions together have effected reductions in passenger fares, freight rates, and the charges of public utilities amounting to approximately \$840,000 per annum. The total expenses are \$25,000 per annum for the two Commissions. From this it will be seen that for every dollar the two Commissions cost the people are saving about \$30. The details of these savings were given in our last annual report up to that time. The difference between the figures therein stated and those now given represents the additional savings for the year 1914. Detailed statements of expenses of both the Railroad and the Public Service Commission appear later in this report.

OUR FRIEND, THE STATE PRINTER

It is a pleasure to be able again to refer to the obligations that we are under to the State Printing Office for kindly, considerate, and efficient assistance in connection with the work of this Commission. In its general class and character, the work referred to leaves nothing to be

desired, and the head of that department has never failed the Commission in any emergency when printed documents were needed at short notice. This means much to the State. The law requires that all of our printing shall be done by the State Printing Office except in cases of emergency. It would be easy to invoke an emergency in justification of placing an expensive printing contract in the hands of private printers, but it has not been found necessary to do so because of the unfailing readiness of the State Printing Office to respond to every reasonable request.

Following is a detailed statement of the cases considered by the Commission during the year 1914:

STATUS OF CASES REFERRED TO IN FORMER REPORTS WHICH WERE STILL PENDING BEFORE THE COMMISSION OR THE COURTS AT THE CLOSE OF THE YEAR 1913.

Case No. 181—Switching Charges at Goldfield.

This case entitled "Petition of the Las Vegas and Tonopah Railroad Company and Tonopah and Goldfield Railroad Company," the details of which are fully set forth on page 57 of the Commission's fifth annual report, was decided August 1, 1914, the following opinion and order having been ordered:

[Case No. 181]

BEFORE THE RAILROAD COMMISSION OF NEVADA

LAS VEGAS AND TONOPAH RAILROAD COMPANY, *Petitioner*,

v.

TONOPAH AND GOLDFIELD RAILROAD COMPANY, *Respondent*.

In the Matter of Switching Rates within the Goldfield District

Final hearing held at Carson City, Nevada, November 13, 1912.

Appearances:

On behalf of Petitioner—Mr. C. O. Whittemore.

On behalf of Respondent—Mr. Hugh H. Brown.

OPINION

BARTINE, Chief Commissioner:

This case was originally taken up informally, under Case No. 85, and was based upon an application made by the Las Vegas and Tonopah Railroad Company for this Commission to determine what were proper rates to be charged for switching service between itself and the Tonopah and Goldfield Railroad Company within the Goldfield district. From the application of the petitioner, it appeared that the Las Vegas and Tonopah Railroad Company is a party to a contract with the Tonopah and Goldfield Railroad Company, wherein both of the said carriers agree, reciprocally, to render switching service to or from mines or industries located on their lines within the Goldfield district to the rails of the other line when shipment originates, or is destined on or to a point not reached by the carrier performing the switching service, the compensation for the service to be a flat rate of \$10 per car. It further appeared from the application that the Las Vegas and Tonopah Railroad Company had published, and in effect, Terminal Tariff No. 10-A, a copy of which is on file with this Commission, providing in Item No. 7 a rate of 30 cents per ton of 2,000 pounds, minimum 15 tons, at Goldfield, when car originates at or is destined to mines, mills, or sampling works located on the track of this company, or private spurs or side-tracks connected with the tracks of this company within the regular switching limits. It still further appeared that 14 cars of ore had been switched by the petitioner for the Tonopah and Goldfield Railroad Company from mines in the Goldfield district to the side-tracks of certain reduction plants. The question at issue was whether these 14 cars of ore should be charged for at the rate of 30 cents per ton, according to the published tariff, or \$10 per car, as provided by the contract between the two companies.

After an informal hearing, a tentative opinion was filed which held, in brief, that the published rate of 30 cents per ton must be applied. It was suggested

by the Commission that the charge of \$10 per car between the roads constituted discrimination against the general public and that such discrimination might be removed by embodying in their published tariff a provision making \$10 per car the maximum rate to be charged in all such cases. As the Tonopah and Goldfield Railroad Company was not represented at the hearing, it was decided that said company should be notified, and be given opportunity to make such showing as its interests might require. Accordingly, the official hearing took place November 13, 1912, both roads appearing by counsel.

In this connection it is proper to say that the charge of \$10, established by the two roads, was accepted by them and put into effect; therefore, the only question to be determined now is as to the proper charge to be applied for the switching of the 14 cars of ore above referred to.

We can see no reason for departing from the conclusions reached at the first hearing. As the second hearing proceeded, the fact was disclosed that there was another switching rate in vogue, carried in the tariff of the Las Vegas and Tonopah Railroad Company, of \$5 per car. This, however, appears to have been a strictly local proposition, covering cases only in which cars were switched from one siding or spur to another, for the accommodation of different patrons. We are not able to see how the \$5 rate has any bearing upon the issue presented. The sole question between the parties appears to have been whether the \$10 rate, provided for by contract, or the 30 cents per ton rate, as set forth in the published tariff, should govern. Under the facts and circumstances disclosed at the hearing and in view of the law, the Commission is constrained to hold, and does hold, that the proper rate to be applied upon the 14 cars mentioned is 30 cents per ton of 2,000 pounds.

An order should be entered in conformity with this view.

ORDER

It Is Hereby Ordered, That the settlement for said 14 cars be made upon the basis of a charge of 30 cents per ton of 2,000 pounds.

[SEAL]

Dated August 1, 1914.

RAILROAD COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

Case No. 204—Cost of Making Improvements on Spur Track of Nevada Gas Company at Tonopah, Nevada.

Case No. 204, entitled "Nevada Gas Company v. Tonopah and Goldfield Railroad Company," the details of which are fully set forth on page 66 of the Commission's fifth annual report, was decided April 12, 1914, the following opinion and order having been entered:

[Case No. 204]

BEFORE THE RAILROAD COMMISSION OF NEVADA

NEVADA GAS COMPANY, *Complainant*,

v.

TONOPAH AND GOLDFIELD RAILROAD COMPANY, *Respondent*.

Hearing held at Tonopah, Nevada, October 2, 1912.

Before First Associate Commissioner J. F. Shaughnessy.

Counsel for Complainant, Mr. H. H. Atkinson.

Counsel for Respondent, Mr. Hugh H. Brown.

OPINION

BARTINE, *Chief Commissioner*:

This case was brought before the Commission by a complaint filed on behalf of complainant alleging, in substance, that the respondent company had unjustly refused to deliver freight upon the spur or service track of the complainant, which was connected by switch with the line of the Tonopah and Goldfield Railroad, or to receive freight therefrom. The respondent company justified such action by alleging that the switch connection, including the frog, was worn by use, and that, by reason of the necessity which had arisen for the laying of heavier rails upon its line, the connection with the service track of the complainant had become unsafe for traffic. To this allegation the complainant replied that if the changes alleged by respondent to be necessary were so in fact, it was the duty of the respondent company to make the changes at its own expense. This replication, as it may be called, was controverted by the railroad company, which alleged that

it was the duty of the complainant to bear the expense of the changes which had become necessary in the switch connections referred to. So the issue was narrowed down to this simple question: Which party was legally bound for the expense of making the changes? assuming them to be necessary, which is not denied, except as the complainant alleges that the changes were not made necessary by any of its acts, and were not necessary in fact for the rendering of service to complainant.

The duties and obligations of the respective parties with regard to the matter in controversy are set forth in an agreement entered into on the 9th day of March, 1910. This agreement reads, in part, as follows:

Whereas, a certain spur track has been heretofore laid and constructed at the town of Tonopah, County of Nye, State of Nevada, which said spur track is indirectly connected with the main line of the railroad track of said first party [meaning the railroad company] at Tonopah, Nevada, and which said spur track is particularly described as follows, to wit:

Commencing at Engineer's Station No. 0-000, which is equal to Engineer's Station No. 3180-48.7 of the Montana Tonopah Mining Company's spur, then extending in a generally southwesterly direction 250.0 feet to Engineer's Station No. 2-50.0, as shown on blue-print dated Tonopah, Nevada, April, 1907, hereto attached, and made a part thereof.

Whereas, the second party [the gas company], the owner of said spur track, is desirous of having said first party operate the same with its cars and engines as hereinafter provided, and said first party is willing to operate the same upon said terms and conditions:

Now, therefore, in consideration of the premises and of the covenants and conditions herein contained, and of the sum of one dollar, interchanged between said parties, and for other good and valuable considerations, the said parties mutually covenant and agree to and with one another in the manner following, that is to say:

First, said second party [the gas company] hereby agrees to keep said spur track in repair at all times during the life of this agreement, at its own expense. In case said second party elects to maintain and keep said track in repair with its own labor, etc., the said repairs so made shall be subject to the supervision and acceptance, as to safety, of Engineer Maintenance of Way of said first party.

The matter set forth above, in brackets, is not contained in the agreement, but was simply inserted for the purpose of clearness. The quotation given contains all of the contract which is necessary for us to consider in passing upon the question at issue. It is to be noted, in the first instance, that the Nevada Gas Company, the complainant herein, is named as the owner of the spur track in question. Apart from any specific contract or agreement, it is elementary law that the owner of property is bound to keep it in repair. Beyond this, however, the agreement, in terms, provides that the second party, namely, the gas company, shall keep the spur track in repair, and that it shall be done subject to the supervision and acceptance, as to safety, of and by the railroad company's engineer.

It appears that by reason of heavier traffic it is necessary for the railroad company to lay heavier rails at the point of switch connection. This makes it equally necessary to lay a frog to correspond. The gas company claims that this is a matter which concerns the railroad company alone, and one with which it, the said gas company, has no concern; that the present connections are quite sufficient for complainant's service.

This does not impress the Commission as being a sound contention. A spur track, such as complainant's, is merely incidental to the railroad company's lines. The connection between that spur track and the lines of the railroad company must conform to the general requirements of the railroad company with respect to other business passing the point of connection and using the same frog. If this switch connection pertained to nothing but the gas company's business, there would be some force in the gas company's claim that it should not be subjected to any additional expense by the laying of heavier rails and the placing of a heavier frog. But such is not the situation. The spur line under consideration branches off from the railroad company's line at a point where the railroad company has other and very important business. Under the circumstances, we can reach no other conclusion than that the spur line must be made to conform

to the requirements of the line with which it connects. It seems to us that, by fair interpretation, the contract clearly implies that, when repairs are made, they must be made in a manner satisfactory to the railroad company's engineer, having the safety of traffic in view, which is always a prime consideration. The switch connection, in so far as it is necessary to make the spur track available for service, must, we think, be considered as a part of the spur track. It being the duty of the gas company, under its own contract, to keep that spur track in repair, and in such manner as to be satisfactory to the railroad company, we cannot avoid the conclusion that the gas company should bear the expense of the switch connection.

It is urged, in an argumentative way, by the gas company that, if the contention of the railroad company is sound, that company might continue to increase the weight of its rails to 70, 80, or 90 pounds, thus entailing a great deal of unnecessary expense upon the complainant. This argument, however good it might be in the abstract, presents entirely too remote and improbable a contingency to be seriously considered in passing upon the question now before us. We are not at liberty to suppose that the railroad company will arbitrarily, wilfully, and needlessly go on increasing the weight of its rails to the injury of complainant in the manner suggested. The change from a 50-pound rail to a 60- or 65-pound rail seems to be entirely reasonable under the circumstances; in fact, that it is made necessary by increasing traffic.

When the complainant entered into its written agreement with the railroad company it is fair to assume that it had in view the operation of the railroad in a manner that would conform to standard custom and usage. Indeed, if the railroad failed thus to operate its road, the gas company would have good cause for complaint.

Looking upon the changes and improvements made as being reasonably necessary, the Commission finds as a fact that the gas company, complainant herein, should properly bear the burden of the expense; and as the railroad company has made said changes and improvements at its own expense, the Commission further finds that it is entitled to receive the same from the Nevada Gas Company, the complainant in this proceeding.

As this matter is in the nature of an arbitration proceeding, and both parties have expressed a willingness to act in conformity with the decision of the Commission upon the point in dispute, it is expected that the Nevada Gas Company will make prompt adjustment with the Tonopah and Goldfield Railroad Company, in accordance with the conclusions stated above.

OFFICE OF THE RAILROAD COMMISSION OF NEVADA,
CARSON CITY, April 12, 1914.

All Commissioners being present, the foregoing opinion is approved and adopted as the decision of this Commission.

[SEAL]

RAILROAD COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

Case No. 207—Deposit Required for Installation of Telephone Service by Bell Telephone Company of Nevada.

This case, entitled "Railroad Commission of Nevada v. Pacific Telephone and Telegraph Company," was brought by the Commission on its own motion August 28, 1912, as shown on page 68 of the fifth annual report.

The first hearing in this proceeding was held October 12, 1912, in Carson City, Nevada, at which defendant company was represented by its special agent, Mr. Pendergast. The second hearing took place in Carson City on September 27, 1913, at which the company was represented by its attorney, Mr. James T. Shaw. Under date of October 24, 1913, defendant filed its brief in the case, and submitted the same for decision.

The following opinion and order was entered by the Commission February 21, 1914:

[Case No. 207]

BEFORE THE RAILROAD COMMISSION OF NEVADA

RAILROAD COMMISSION OF NEVADA, *Complainant*,

v.

PACIFIC TELEPHONE AND TELEGRAPH COMPANY, *Respondent*.

OPINION AND ORDER

BARTINE, *Chief Commissioner*:

This proceeding has been pending for a long time, but has been kept in the background by press of other business, and to some extent by requests of the respondent company for delay.

The matter was taken up by the Commission on its own motion, such proceeding having been induced by numerous informal complaints. The subject-matter of the proceeding is the usage or custom of the respondent company requiring a deposit of five dollars upon the installation of a telephone. Such charge, upon its face, appears to be a rather small matter; but it must be borne in mind that when the charge is made to a great many people it becomes a subject of very considerable importance. It is not going too far to say that probably no one thing connected with the service of the telephone company has given rise to more complaint than the installation charge mentioned.

The case finally came to a formal hearing on September 27, 1913, the respondent being represented by Mr. James T. Shaw, as its attorney. Mr. Shaw made a full and comprehensive statement of the position of the company with respect to the charge complained of, and presented in detail its reasons for the making of said charge.

The statement made by Mr. Shaw was accepted by the Commission as the equivalent of sworn testimony covering the same facts, and the respondent having nothing further to offer, the case was closed. It remains for the Commission to determine whether the charge as made is a reasonable one for installation, and whether the custom of making an installation charge at all is just and proper.

The Commission is of the opinion that the charge is not a reasonable one; that it operates in a discriminatory way, and is the just and proper cause of much dissatisfaction among the patrons of the respondent company.

For the purpose of a clear understanding it may be well to state what has been characterized by the company's representative as the "present plan" with reference to the deposit for installation:

A five-dollar deposit is required on new contracts for regular exchange service subject to the approval of the application for service by the company, and is returned to the subscriber if the service is not established.

Upon fulfilment of the terms of the contract, the deposit is refunded to the subscriber, with interest, at the rate of 6 per cent per annum, or is placed to the credit of his account if he so elects.

Upon the nonfulfilment of the terms of the contract, the deposit is forfeited by the subscriber. The deposit is returned, however, to the subscriber, without interest, in the event that a new occupant of the same premises signs a one-year contract, and then tenders a deposit therefor, or at the time we refund the deposit to the original subscriber.

Exception to plan: It has been found advisable to make exceptions in extraordinary cases where there could be no question as to the subscriber's credit.

Pending the fulfilment of the terms of the contract, the guarantee deposits are carried on the general books as "Accounts Payable." Upon fulfilment of the terms of the contract, the subscriber is at once notified, and, at his option, the deposit, plus interest at 6 per cent per annum, is refunded or applied to the credit of his account. Forfeited deposits are transferred from "Accounts Payable" and taken up as "Exchange Revenue—Subscribers' Stations."

In defense of this plan, requiring a deposit of five dollars, as stated, the following reasons are given, which reasons are discussed in the order of their statement:

First—"The installation of a telephone and furnishing service requires an immediate outlay on the part of the company."

To this reason it may be answered that every act performed by a telephone

company, or any other public utility, that is requisite for the rendering of the service, standing by itself, is an item of expense. The aggregate of these items makes up the aggregate expenses of the public utility. We are not able to appreciate the force of the contention that every specific item of such expense should be specially provided for in the conduct of the business of the utility. It seems to us that the charges made for the service should be so adjusted as to afford the company a fair return for the service as a whole. If attempt is made to single out particular items of expense and provide for them specially, no good reason appears why the same should not be done with regard to *all* items of expense, which would lead to a very complex business situation. The installing of telephones is an essential part of the business of a telephone company. Without such installation the service cannot be rendered, therefore sound business policy would seem to require that charges should be applied which would cover the service as a whole, which necessarily includes every specific item of expense.

Second—"Short-term contracts—that is, contracts for periods of less than one year—are unprofitable at regular rates."

This reason is not appealing. It involves in principle the same idea as that contained in the first reason quoted, namely, that every item of service should be profitable in itself. This does not seem to us to be sound. It is almost impossible to imagine any line of business in which every item or branch is profitable in itself, or would be profitable if it stood alone. Take, for illustration, the charges of a transportation company for carrying passengers. Assume that the rate is 4 cents per mile. Obviously there is no single mile segment of any railroad in the State of Nevada that would be profitable if operated by itself upon that basis. But the railroad is considered as a whole; its business is treated as an entirety. The long hauls and the short hauls enter into and make up the sum total of its business. If, upon the whole, that business is profitable, the carrier should be satisfied. And this is the principle that is quite generally acted upon today by commissions and courts. We can see no reason why the business of a telephone company should not be treated as an entirety. Some patrons have their telephones installed and keep them in place for many years. Others retain them but a short period of time. But if, upon the whole, the business is fairly remunerative, the telephone company has no just cause for complaint. If the respondent company had no business except the patronage of those who retain their telephones for one year or less, it is safe to say that it would not continue in business very long.

The third reason is "That the disconnection of a telephone is an additional expense to that of the original installation."

This involves the same idea as that set forth in the first two reasons quoted. It goes without saying that the disconnection of a telephone, considered as a separate and distinct act, involves some expense—much or little, according to circumstances—but, as before stated, it enters into and forms a part of the general expense account and should only be considered in its connection with the business as a whole.

The fourth reason given is "Many telephone users discontinue service for various causes before the expiration of the contract, and, frequently, their accounts become uncollectible. As the cost of installation, operation, and disconnection, to which uncollectible moneys must be added, often exceeds the annual rental rate, the company suffers definite loss, which, naturally, has to be borne by its patrons."

We do not see how the foregoing adds much, if anything, to the force of the reasons previously quoted. It simply goes to show that in the transaction of its business the company takes some chances of loss through its short-time customers. But the principle involved in nowise differs from that of the case of a carrier whose short-trip passengers would not, as a separate item of business, be profitable. Everything that is said in the reason last quoted might be true, and at the same time it might not follow that the deposit theory would be sound or equitable. The avowed reason for exacting the deposit is to save the company from loss, and it is declared by the company itself that the deposit is not fully effective for that purpose. The deposit charge is clearly an injustice to the honest patron who retains his telephone for more than a year. Even though it be returned to him at the end of that time with 6 per cent interest, he has actually been obliged to make what is, in effect, a forced loan to the company—this in pursuance of a custom which has been inaugurated by the company to protect itself against those who are the least honest and least permanent in their patronage.

The fifth reason given for requiring the deposit is that "Monthly rental in advance is not sufficient protection."

This may or may not be true, if we consider separately each account which it is desired to safeguard. But it brings us right back to the proposition heretofore made that the business should be considered as a whole, and not be conducted with reference to the consequences which may follow from particular transactions. It may be said with equal force that advance payment by a passenger upon the railroad, who rides only one or two miles, would not make the carrying of that passenger, alone, a profitable transaction. But the facts are that the trains are being run regularly, passengers get on and off at almost every station, some travel longer distances than others, and altogether they make up the sum total of the railroad company's passenger traffic. So with the telephone business, some continue their patronage for a long number of years, paying regularly and promptly, all the time, while others continue their patronage for only brief periods. As long, though, as the charges are made in advance, and the company is active in the collection of such charges, we are not able to see why there should be any considerable loss through short-time patrons.

The sixth reason given is that "The telephone company, as a public-service corporation, cannot, without discrimination, extend or refuse credit at its discretion. As all people are entitled to service, but all are not entitled to credit, a method of protection is necessary."

Answering this, it may be said that the telephone company as a public-service utility can refuse credit. And this Commission is not disposed to require the company to furnish service in advance of the payment. We do not think that reason number six fairly states the situation.

The seventh reason given is that "Other public utilities and many private enterprises require a deposit." This is apart from the issue. We are not concerned, especially, with what other public utilities or private enterprises may do with respect to a deposit. It is for us to determine whether or not, in the case of a telephone company, this custom is just and proper.

The same answer holds good with respect to the eighth reason given, namely, "Public-service commissions, municipal governments, and courts have held the requirement of deposits to be a reasonable regulation."

We do not think it is with respect to a telephone company, although it might be in the case of some other utility where the service is rendered upon a meter basis, and where the amount of bill or charge cannot be determined in advance.

This Commission has no desire to deny to any public service corporation the right reasonably to protect itself against loss through the inability or unwillingness of its customers to pay. But we feel that, under the conditions shown to exist in this case, the respondent company can be adequately protected without the deposit now being charged, and which has been made the subject of so much complaint. We can see no reason why a charge of two months in advance for every telephone installed, with charges monthly in advance thereafter, will not fairly and reasonably protect the company against loss. It is possible that rare and exceptional cases might occur in which such a method of payment would not be adequate protection, but, as we have already suggested, the respondent company claims that even the deposit system does not give full protection in all cases. As in the case of private enterprise, public utilities must expect to take some chances. All business involves some risk. We believe that if the company be allowed to charge for two months in advance at the time of installing the telephone, and thereafter to collect for one month in advance, it will be fairly and reasonably protected. Such a course will do away with the discrimination complained of, and remove much of the friction and ill-feeling which is engendered by the exacting of the five-dollar deposit. It is the view of this Commission that the custom of charging a deposit of five dollars upon the installation of a telephone should be discontinued, and that in lieu thereof the respondent company should be permitted to charge for two months' service in advance as a condition precedent to the installation of the telephone, and that thereafter one month's advance payment may be at all times required.

ORDER

OFFICE OF RAILROAD COMMISSION OF NEVADA,
CARSON CITY, February 21, 1914.

Present—Chief Commissioner H. F. Bartine, First Associate Commissioner J. F. Shaughnessy, Second Associate Commissioner W. H. Simmons, Secretary E. H. Walker.

Pursuant to the views expressed in the foregoing opinion, it is hereby

Ordered, That on or before April 1, 1914, Bell Telephone Company of Nevada desist from its present custom requiring a deposit of five dollars (\$5) or any other sum, from its patrons and customers, upon the installation of a telephone. It is further

Ordered, That from and after said date, or whenever the custom of demanding an advance deposit shall be discontinued, two months' payment in advance may be demanded by said company as a precedent to the installation of new telephone service for any would-be patron or customer, and that, after the expiration of the two months' period, the respondent company shall be permitted to demand and receive one month's payment in advance, as a condition of the continuance of such service.

[SEAL]

H. F. BARTINE, *Chief Commissioner*,
J. F. SHAUGHNESSY, *First Associate Commissioner*,
W. H. SIMMONS, *Second Associate Commissioner*.

Attest: E. H. WALKER, *Secretary*.

Case No. 211—Coal Rates, Utah and Wyoming Points to Points in Nevada.

This case, entitled "Railroad Commission of Nevada v. Southern Pacific Company, *et al.*," details of which are set forth on page 69 of the Commission's fifth annual report, is still pending, no further action having been taken.

Case No. 225—Switching Rates on the Nevada Copper Belt Railroad Between Wabuska and Thompson.

Case No. 225, entitled "Mason Valley Mines Company v. Nevada Copper Belt Railroad Company," details of which are partially set forth in the Commission's fifth annual report on pages 73 and 74 and on pages 32 and 33 of the sixth annual report, was decided July 22, 1914, the following opinion and order having been entered:

[Case No. 225]

BEFORE THE RAILROAD COMMISSION OF NEVADA

MASON VALLEY MINES COMPANY (a Corporation), *Complainant*,

v.

NEVADA COPPER BELT RAILROAD COMPANY (a Corporation), *Respondent*.

OPINION AND ORDER

BARTINE, *Chief Commissioner*:

The complainant is the owner of a smelter located at the town of Thompson, Lyon County, State of Nevada. The respondent is the owner of a railroad extending from the town of Ludwig to Thompson, both places being in said Lyon County. A large portion of the business of the railroad company consists of hauling ore, limestone, etc., over the line of its road from various points thereon to the smelter of the complainant at Thompson. At the town of Wabuska upon the Nevada and California Railroad, owned and operated by the Southern Pacific Company, the Copper Belt Railroad connects with said line, crosses it, and proceeds on for a distance of 2.7 miles to the smelter located at Thompson. Besides the ore, which is hauled by the Copper Belt Railroad from mining properties located upon its own line, ores are brought to Wabuska over the Nevada and California line from other mining districts, and thence switched via the Copper Belt Railroad to the smelter at Thompson. The charge made by the Copper Belt Railroad for such switching is \$5 a car. The complaint in this proceeding alleges that this charge is excessive, unjust, and also in violation of a special contract made and entered into by the Copper Belt Company with the Mason Valley Mines Company, the complainant in this proceeding. The complaint alleges that certain charges agreed upon in the contract referred to, namely, for ore and supplies, \$2.50 per car, and for coke, coal, fuel, and oil, \$2 per car, would be just and reasonable, and asks the order of this Commission prohibiting the respondent company from charging more than such rates. Various parties interested in the ore tonnage hauled to said smelter over the line of the Nevada and California Railroad, and switched at Wabuska to the smelter, also petitioned the Commission for relief from the \$5 charge, and asked that the railroad company be allowed

to charge no more than \$2 per car for said switching service. As the sole question at issue is the reasonableness of the switching charge made by the respondent company, it was not deemed necessary to make the signers of the petition nominal parties in the proceeding, although counsel for the Mason Valley Mines Company entered his formal appearance on their behalf, and represented them at the hearing.

IMMATERIAL MATTER IN PLEADINGS

Both the complaint and the answer contain considerable matter not within the jurisdiction of this Commission. The Commission is not a court of equity, and has literally no power to make an order for the specific performance of the contract referred to. The answer alleges, among other things, that on numerous occasions its equipment was seriously damaged by the negligent and wrongful acts of the complainant. This is a matter strictly within the jurisdiction of a court of law, and one concerning which this Commission could make no valid order. Neither can the Commission, for the purposes of this case, weigh the damages alleged by the respondent against the provisions of the contract alleged by the complainant, and attempt to make any offset or adjustment, or in fact any order whatever respecting the same. To make an order prohibiting the railroad company from charging more than \$2.50 and \$2, respectively, for the switching of cars because of the alleged provisions in some contract would, in its effect, be an attempt on the part of this Commission to enforce such contract. In other words, it would be an order requiring the railroad company to make no more than certain charges, not because such charges are reasonable, *per se*, but because it is so provided by contract. The impropriety of the Commission attempting to make any order based upon assumed contract obligations will be further apparent when it is considered that the parties to the petition referred to, and who were also represented at the hearing, were not parties to the contract, and, even in a court, a judgment for the specific performance of a contract between certain parties could not in any way be made to apply to others who were not parties to the contract. The parties signing the petition asking for a \$2 rate, and which petition was made a part of the record in this case, claimed nothing under the contract, but based their complaint solely upon the ground that a \$2 rate for switching is reasonable, *per se*. It is obvious that, if this Commission were to make an order prescribing certain rates merely because of a contract between the railroad company and a particular party, and not because such rates are reasonable, *per se*, it might very easily result in discrimination against other shippers who were not parties to the contract, or, if a general order were made prescribing the rates named in the contract, it might be giving parties in no way connected with the contract something lower than reasonable rates merely because such rates were named in a contract to which they were not parties.

NO POWER TO ORDER SPECIFIC PERFORMANCE

But it is not necessary to pursue this matter further because it is perfectly clear that the Commission has no power to order the specific performance of a contract. Our authority is to prescribe rates that are just and reasonable in themselves, regardless of all special agreements between shippers and carriers. The only consideration we can give to the alleged contract, if any, is its probable or possible bearing upon what the parties themselves considered to be reasonable rates at the time the contract was made. However, from a traffic standpoint, this would not be conclusive, because conditions frequently change on all roads, and rates reasonable at one time may not be reasonable at another.

RESPONDENT'S PUBLISHED RATES

It seems, though, that the respondent company had established and published a switching charge of \$2.50 per car, and it was changed from \$2.50 to \$5, which led to the filing of the complaint in this proceeding. It is a fact recognized by the Interstate Commerce Commission that when a carrier voluntarily establishes certain rates, and maintains them for a considerable period of time, it raises the presumption against the carrier that the rates thus established are fairly and reasonably remunerative, because the carrier is not likely to establish rates so low as not to result in a just compensation for the service rendered. This presumption, however, is not conclusive, because the carrier, in fixing those rates, might be mistaken as to what would be fairly compensatory. The business, for example, might be much less than was anticipated, or there might be difficulties and expenses connected with the service that could not be foreseen.

PRESUMPTIONS ARISING FROM THE SCHEDULE

In this case, while the Commission would not be justified in conclusively presuming against the carrier that a \$2.50 rate was reasonable, it seems, nevertheless, proper to be considered in passing upon the reasonableness of the increase from \$2.50 to \$5. The advance is 100 per cent, and it may very easily be that, while the \$2.50 rate is too low to be fairly compensatory, the \$5 rate may be altogether too high to be just and reasonable. In fact, the Commission has reached the conclusion in this case that, under all the facts and circumstances connected with the movement of these cars, a \$2.50 rate is too low to be just and reasonable to the company, and at the same time that the \$5 rate substituted therefor is too high to be just and fair to the shippers. This matter will be more specifically dealt with later on.

COMPLAINT REFERS TO A SPECIAL SERVICE

In reaching our conclusions we have not given very much consideration to the aggregate value of the railroad company's property, or to its earnings and expenses, for the reason that its schedules of rates, as a whole, are not under review. The complaint is that the charge for a certain service—namely, switching cars from Wabuska to Thompson—is too high. This is comparatively a small part of the railroad company's business, and, even though its business as a whole were not profitable, it would not be justified in charging rates for this switching service which can be regarded as excessive, when considered in the light of recognized standards for such service, and by comparison with charges made by other roads under similar conditions. This principle, however, must, in justice, be applied both ways. It would be unfair to invoke it against the carrier and not give the carrier the benefit of it against the shipper. Hence, the latter is bound to pay what is reasonable for the service which he receives, regardless of how much money the carrier may make in other ways and from business furnished by other patrons of the road.

DELAY IN FILING BRIEFS

In this case there was long delay in the filing of briefs, and, as a matter of fact, counsel for the respondent company filed none at all. That of the complainant, written by Mr. S. W. Belford, is elaborate, exhaustive, and forcible, from the viewpoint of the interests which he represents. Much of it, however, goes to points already briefly touched upon in this opinion.

THE COMMISSION NOT A COURT

The complainant insists strongly that the respondent carrier should not be permitted to depart from the rates specified in the alleged contract between the complainant and the respondent because the business interests of the complainant have been built up, to some extent, at least, upon a basis of those rates. Some authorities are cited and quoted from to sustain this view. No one will deny that in such case there is an equity on behalf of a party who has established a business upon the basis of rates which it was understood would be permanently maintained. But, as before stated, these are questions for the courts, and not for railroad commissions, to determine. In this behalf it is proper to suggest that the language used by the commissions and courts in the cases referred to by complainant's counsel are more or less general, and that the principle laid down, when applied to a specific case, was emphatically rejected by the Supreme Court of the United States in what is generally known as the Willamette Valley Lumber Case, which is the latest expression upon the question by that great court. In that case the railroad company raised the rates on lumber. The people living in the valley, and affected by the raise of rates, objected, and complained to the Interstate Commerce Commission, setting up in substance that they had been induced to engage in the business by the low rates applied by the railroads and that it was inequitable to allow the carrier to afterwards raise the rates to their injury. The Interstate Commerce Commission accepted this view, and made its order accordingly. The Supreme Court of the United States held that the order was void, because the jurisdiction of the Interstate Commerce Commission was confined to the fixing of rates that would be just and reasonable in themselves, and did not extend to the adjusting of collateral equities between the carriers and the people interested in the rates—in short, that it was no part of the business of the Interstate Commerce Commission to undertake to build up the commercial interests of any section by an adjustment of the freight rates. The reason for this is perfectly obvious. If

the principle were carried too far, it might easily result in throwing upon the railroad the entire burden of sustaining and building up the business of the section through which it operates. In deciding the case referred to, the Supreme Court said, in substance, that if the Commission had found that the rates formerly in effect, and which it was sought by the railroad to raise, were reasonable, *per se*, that would have presented an entirely different question. But when the Interstate Commerce Commission undertook to maintain those rates and prohibit the railroad company from raising them because of some understanding, expressed or implied, with the people living within the region to be affected, the Commission was going beyond the scope of its statutory authority and usurping the functions of the courts. Therefore, in dealing with this matter, the Commission does not feel that it is justified in holding the carrier to the rates of \$2.50 per car for ores, and \$2 per car for coal, fuel, oil, etc., merely because those are the figures named in the contract. We can consider only what are reasonable rates viewed from a transportation standpoint.

COST OF THE SERVICE

It is not an easy matter to determine with mathematical exactness what would be a reasonable rate for this service. The witnesses for the complainant estimated that the cost of the service to the railroad company was 2 cents per ton per mile, and that the average tonnage per car was 15, which would make the actual cost about \$1.40 per car. These, however, were mere estimates, and were not based upon specific and detailed figures. On the other hand, witnesses for the respondent estimated that the actual cost was about \$4.46 per car, and this estimate was based upon something in the way of mathematical tabulations. It is fair to assume, in the absence of definite proof to the contrary, that the complainant's witnesses estimated the cost at as low a figure as possible, and that the witnesses for the respondent made the cost as high as possible. This does not mean that the witnesses on either side were dishonest, but simply that each looked at the matter from his own viewpoint, and with an eye to the interests which he represented or favored. So it often happens that the bias of a witness affects his judgment. The Supreme Court of the United States, in some of its recent decisions, has very pointedly referred to the fact that estimates of costs and values made by experts are seldom to be taken at their full face value, because there are so many elements of uncertainty which enter into their estimates.

A SWITCHING PROPOSITION

In dealing with this matter, the fact must be kept in mind that so far as the charge complained of is concerned it is one made for switching, and that this traffic contributes nothing to the earnings of the main line. The ore produced in the district traversed by the Copper Belt Railroad is carried over the main line of that road to Wabuska, and thence to the smelter, 2.7 miles further on. This traffic may properly be regarded as entirely main-line business, because the extension from Wabuska to Thompson simply makes the road 2.7 miles longer than when its terminus was at Wabuska. With regard to the main-line tonnage, there is really no switching service rendered, unless it be immediately within the yards at Thompson. There is no reason to doubt that the charges for the hauling of this ore are adjusted so as to cover the entire service rendered. As to that, it is not necessary for us to decide, because the question is not before the Commission, and the matter is only referred to for the purpose of pointing out the distinction between ore tonnage which is carried over the main line of the railroad company to the smelter, and that which is simply switched by the Copper Belt Railroad from Wabuska to Thompson, and with respect to which the railroad has no main-line haul. Whether the portion of the road between Wabuska and Thompson is regarded as a part of the main line, or technically a switch, makes no difference for the purposes of this case, because both parties have considered and treated the service in question as a distinctively switching proposition, and a switching service may be rendered over a piece of main line just as well as over a branch or spur. Whether that piece of line be considered a spur or a part of the main line can make no difference in regard to the reasonableness of the charge complained of, because in either event the service is exactly the same.

THE SERVICE NOT A MERE INCIDENT

Counsel for the complainant urges quite strongly in his brief that this service does not require any additional equipment on the part of the respondent com-

pany; that it is merely an incidental service; therefore that it should be rendered at actual cost. To accept this view would be equivalent to saying that the Copper Belt Company can be lawfully required to render, at no profit to itself, a service of value to people who bring ores to Wabuska over the Southern Pacific Company's line merely because it (the Copper Belt Railroad) is making money somewhere else on other portions of its business and through the patronage of other people. We do not think that such a principle can be sustained. When ore is brought to Wabuska destined to the Thompson smelter, no one is under any obligation to carry it to its final destination except upon the basis of fair compensation. It seems, to the writer of this opinion, inaccurate to speak of the service as being merely incidental. When ore is brought from the mines over the main line of the respondent company and then is switched within the Thompson yards, it may be fairly said that the switching is incidental to the main-line haul; but with respect to the switching service now under consideration there is no main-line haul so far as the Copper Belt Railroad is concerned. The service of hauling the cars from Wabuska to the smelter and back is a distinct and separate service. It is a service which the Southern Pacific Company cannot render, for it has no track running to the smelter; and it is a service which the Copper Belt Railroad is under no obligation to render, except, as before stated, on a basis of just and reasonable compensation, which should include a reasonable profit. In the case recently decided by the Supreme Court, holding invalid the switching charges made by the railroads at Los Angeles, San Francisco, and San Diego, the decision was based squarely upon the principle that the switching of cars by those roads, at their terminals, was simply a part of the terminal service to which the shipper was entitled, without being required to pay an additional charge. The court held that the various switches were, in fact, a part of the terminal facilities of the great railroads involved. But the court also very clearly distinguished between a switching service rendered, as in those cases, where the roads had a main-line haul, and other cases in which there was no main-line haul, but the switching was the only service rendered, and the only source of revenue to the railroad.

In view of the conflicting testimony as to the cost of this service and considering the rates charged generally for switching service throughout the State, a \$2.50 rate seems to be too low, and a \$5 rate too high. Under the conditions existing where this service is rendered, it is believed that a rate of \$3.50 per car will be just and reasonable. It is a matter of common knowledge that cars loaded with ore frequently, and in fact generally, carry considerably more than 15 tons; that a car sometimes carries as much as 50 tons. Whether such is ever the case here, we have no means of knowing, but it seems to us reasonable to believe that the cars switched from Wabuska to the smelter usually carry more than 15 tons. Whether they do or not, the service has to be rendered just the same, and, within moderate variations, the exact tonnage carried by a car will make very little difference in the switching expense to the carrier.

It is scarcely necessary to add that what has been here said applies to freight of every kind and character that is switched by the Copper Belt Railroad from Wabuska to the Thompson smelter.

An order should be entered in conformity with the views herein expressed.

ORDER

OFFICE OF THE RAILROAD COMMISSION OF NEVADA,
CARSON CITY, July 22, 1914.

Present—H. F. Bartine, Chief Commissioner; J. F. Shaughnessy, First Associate Commissioner; W. H. Simmons, Second Associate Commissioner; E. H. Walker, Secretary.

Pursuant to the conclusions stated in the foregoing opinion, it is hereby

Ordered, That on or before the 10th day of August, 1914, in lieu of the present switching charge of \$5 per car between Wabuska and Thompson, and the smelter located at said place, the Nevada Copper Belt Railroad Company shall publish and make effective a charge for such switching service not exceeding \$3.50 per car, the said charge to apply to cars containing ore, coal, coke, oil, and merchandise of every kind and character.

[SEAL]

RAILROAD COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

Under date of August 25, 1914, the Commission received a petition from the Nevada Copper Belt Railroad Company, the defendant in the

proceeding, asking for a rehearing, to which an answer was filed by complainant on August 31, 1914. The petition for rehearing was denied.

Case No. 230—Ore Rates from Points on the Nevada Northern Railway to the Salt Lake Smelter.

This case, entitled "James Cronan, *et al.*, v. Nevada Northern Railway, *et al.*," the details of which are set forth on page 34 of the Commission's sixth annual report, has not been carried further, for the reason that complainants have not asked that the same be carried before the Interstate Commerce Commission.

Case No. 243—Operation of Ruby Hill Branch of the Eureka-Nevada Railway, and Ore Rates, Ruby Hill to Palisade.

Case No. 243, entitled "Richmond Eureka Mining Company v. Nevada Transportation Company and Eureka-Nevada Railway," the details of which are fully set forth on pages 39 to 48, inclusive, of the Commission's sixth annual report, was formally dismissed March 28, 1914.

Case No. 246—Rates on Brick, Hollow Brick, and Tile, Carson to Wabuska.

This case, entitled "H. Luhrs v. Virginia and Truckee Railway and Southern Pacific Company," the details of which are set forth on pages 48 and 49 of the Commission's sixth annual report, was formally dismissed January 31, 1914, such action having been requested by complainant.

Case No. 249—Demurrage Charges on the Nevada-California-Oregon Railway at Reno.

Case No. 249, entitled "Railroad Commission of Nevada v. Nevada-California-Oregon Railway," the details of which are set forth on page 49 of the Commission's sixth annual report, is still being held in abeyance.

Case No. 250—Classification of Fruits and Vegetables.

This case, entitled "Railroad Commission of Nevada v. Southern Pacific Company, *et al.*," the details of which will be found on pages 49 and 50 of the Commission's sixth annual report, was decided by the Interstate Commerce Commission on April 7, 1914, the Nevada Commission winning on all points made. The order of the Interstate Commerce Commission refusing to allow the carriers to put into effect increased classifications on fruits and vegetables moving in both carload and less-than-carload lots, saves the shippers of Nevada approximately \$20,000 per year in freight charges. The proposed charges would have increased the rates about 51 per cent on this class of traffic.

Case No. 255—Switching Charges on Less-than-Carload Freight, Wabuska to Thompson.

Case No. 255, entitled "M. H. Farris v. Nevada Copper Belt Railroad Company," the details of which are set forth on pages 51 and 52 of the Commission's sixth annual report, is still pending. Early in 1914, the complainant, Mr. M. H. Farris, transferred his business to Hall & Morgan, who continued as complainants in this proceeding. Under date of June 29, 1914, a letter was addressed to Hall & Morgan by the Commission, advising them that the defendant company was willing to make certain adjustments in the switching rates, and complainants were asked whether the proposed adjustment would be satisfactory, and if not, whether they desired formal action to be taken. No reply has been

received to this letter up to the time of closing this report, and therefore no further action has been taken by the Commission.

Case No. 260—Charges for Extension Telephone Service.

This case, entitled "Nevada State Journal v. Bell Telephone Company of Nevada," the details of which are set forth on page 53 of the Commission's sixth annual report, was decided by the Commission on March 24, 1914, the following opinion and order having been entered:

[Case No. 260]

BEFORE THE RAILROAD COMMISSION OF NEVADA

RAILROAD COMMISSION OF NEVADA, *Complainant*,

v.

BELL TELEPHONE COMPANY OF NEVADA, *Respondent*.

OPINION AND ORDER

BARTINE, Chief Commissioner:

This proceeding was based upon a complaint filed with the Commission by The Nevada State Journal Publishing Company, acting through its president, Mr. George D. Kilborn. As the original complainant was not prepared to make any specific showing beyond that contained in its complaint, the Commission substituted itself as complainant, and took up the matter upon its own motion, under the provisions of subdivision b, section 12, of the Railroad Commission Law of this State.

The gravamen of the complaint made by the original complainant was that the charges of the respondent company for extensions of the telephone service were excessive, unjust, and unreasonable. These charges are orally denied by the respondent company, and the issue thus made is to be determined by this Commission.

In a case where telephone service is installed in a business establishment the regular custom of the respondent company is to charge \$1 for the extension. The complainant alleges that this charge is excessive for the reason that a telephone instrument only costs from \$10 to \$15. Such being the case, it follows, according to complainant's contention, that the respondent company is realizing about 100 per cent per annum upon the value of each additional instrument installed.

Assuming, for the purpose of discussion, that the one-dollar rate is excessive, it does not follow that the contention of the complainant is sound. The respondent company is entitled to a fair return for the service rendered, and not merely a return upon the value of each particular instrument used in the rendering of such service. Let us assume that in the office of the Journal there were a single telephone connected with the main line. Clearly, the management would not desire additional instruments installed unless there were use for such instruments; if there were such use, then the service must be of some value to the party receiving it.

No telephone company can render a telephone service by simply installing a telephone. There must be transmission lines; there must be the switchboard; there must be all the paraphernalia which goes to make up the full equipment of a telephone company. This plant must be considered, in its entirety, and, in determining the reasonableness of the rates charged, reference must be had to the value of the entire plant, and not of some particular part thereof. The principle is the same as in the case of a railroad. In determining whether passenger fares or freight rates are reasonable, we would consider, not merely the value of the railroad car which is used in transporting the freight or the passenger, but we would consider the railroad as an entirety. We can see no reason why the same rule should not be applied to a telephone company.

It is implied by the complaint that complainant should be permitted to purchase and install its own telephone. With this view the Commission cannot agree. The furnishing of telephones is an essential part of the business of the telephone company. It has undertaken to give complete telephone service, which can only be done by furnishing the necessary instruments. There would be no more propriety in ordering a telephone company to connect with a private telephone than there would be in ordering a railroad company to permit every patron of the railroad to furnish his own car or cars, which would have the effect of depriving the railroad company of a very considerable portion of its business.

Besides, to allow private individuals to install their own telephones, and then require the telephone company to connect such telephones with its transmission lines and switchboards, might very easily lead to complications through a failure on the part of the patrons to provide telephones of standard and uniform make. Further, the owners of such private telephones would still be under obligations to pay to the telephone company reasonable rates for the use of its wires, poles, switchboards, etc. What the charges of a telephone company might properly be under such conditions is hard to say. It is enough, though, to add upon this point that if every private individual installed his own telephone, it would change the entire character of the utility—it would no longer be a telephone company. It would simply be a company owning certain poles, and wires, and switchboards.

We are equally unable to appreciate the soundness of the respondent company's contention that the extension rates are reasonable because of the installation expense. At the hearing which took place September 27, 1913, it was claimed by representatives of the company that the installation of a telephone costs \$7.80, from which it was argued that the charge of \$1 for extensions was reasonable. We are unable to perceive any logical force in this contention. It literally proves nothing, so far as the point at issue is involved. The installing of telephones is part and parcel of the general work of the telephone company. Without such installation, no service whatever can be rendered. In deciding as to what are reasonable rates, we must consider the entire plant, and all of the expenses of the company, without attempting to figure out the exact expense incident to some particular part of the service, such as the installation of a telephone.

The Commission does not and cannot fail to note what appears to be an inconsistency in the attitude of public utilities in dealing with the question of reasonable rates in particular cases. In the case of common carriers, for example, the contention frequently is made that it is impossible to take a particular commodity and determine whether the rate charged for the commodity, standing by itself, is fairly remunerative. Just as frequently, when some particular commodity is charged a higher rate than others, it is defended upon the ground that special service is required in the transportation of that commodity, and, therefore, the higher rate is justified. These contradictory contentions seem to be made to meet the exigencies of differing cases as they arise.

Undoubtedly, it is difficult to take particular items, going to make up the aggregate business of a public utility, and compare accurately the relative cost of doing the work with the revenue derived from that item. It is possible that a closer approximation can be made in the matter of installing a telephone than with reference to carrying a certain commodity in a railroad car along with other commodities. Nevertheless, it seems to us that any attempt to figure out the expense incident to some particular service rendered by a public utility must, in its nature, be more or less misleading. It might well be true that the installation of a single telephone would cost \$7.80, but it by no means follows that in the general work of a telephone company, where hundreds and perhaps thousands of instruments are to be installed, they would average \$7.80, or anything approaching that figure. Even though it did, it is only one branch of the company's expenses. It appears to us, as before stated, that the plant should be considered as a whole. The aggregate expenses should be placed upon one side of the account, the aggregate revenue on the other, and then a balance should be struck.

This Commission has at other times, and in other cases, deemed it necessary and proper to remark that in no great business, whether it be public or private, will each item be found equally profitable. Indeed, it is well known that in many instances particular operations of any business, standing by themselves, would not yield any profit at all. So it may be conceded that if a telephone company had but a single telephone to install, it might easily cost \$7.80, and upon the basis of any charge that is now being made it would be altogether unprofitable.

The classification of freights carried by a railroad is largely arbitrary. It is based upon the judgment of the traffic managers as to the general condition of the business. The same, undoubtedly, is true with respect to a telephone service. In this very case it was asserted by the representatives of the telephone company that the charges made for service in private residences were not remunerative charges, and that such rates could only be maintained for the benefit of resident users because of the higher rates charged to business houses. Here we have a distinct admission of the soundness of our own position that the business should be considered as a whole, and not with reference to the profits and losses upon

some segregated items. In determining whether or not a particular charge is excessive and unreasonable, the Commission must likewise use its own best judgment based upon the facts as disclosed by its investigations.

Taking up the matter immediately under consideration, we may say that when a telephone is installed, either in a residence or in a business house, and it is desired to make an extension to another apartment or to another location in the same apartment, a charge of one dollar per month for such extension appears to be unreasonably high.

Acting upon the principle which has been laid down in this opinion, that the business of the company should be treated as a whole and not merely with respect to the assumed expenses and revenue connected with particular items, attention should be directed to the fact that extensions are merely, as the term implies, additions to a service already being rendered, and from which business, in the aggregate, the company derives a fair and reasonable return. An extension is quite different from an auxiliary service which requires a separate line connected with the main line, and which is, to all intents and purposes, an independent service in itself. An auxiliary line may be used, even though the main service line is out of commission. It might, with equal propriety, be called a substitute line. But, whatever we call it, the service is complete and independent in itself. An extension is different. It is merely an addition to a service already existing and from which the company is deriving a fair revenue. Practically the only additional expense is the installation of an instrument with a short piece of connecting wire. If we considered merely the value of the instruments, a charge of 50 cents per month would be excessive, but, regarding the service which is rendered and which is of value, it seems to us that 50 cents per month for each extension is a fair and reasonable charge—fair to the user and fair to the company.

Considering the business of the company as a whole, we can see no reason why there should be any difference between an extension in a business house and an extension in a private residence. The primary charge against a business house is \$4, while the charge in a residence generally is about \$1.50.

Thus we see that in a business house if the charge of 50 cents be made for an extension, the amount would be \$4.50; if there be two extensions, the amount would be \$5, and so on. The fact that the primary charge in a business house is higher, as a rule, than in a residence furnishes no reason why there should also be a higher charge for an extension in a business house, but rather the reverse.

Considering the question in all of its bearings, a flat rate of 50 cents per month for each extension within the same building, or different parts of the same room or apartment, with or without bells, seems to be fair and reasonable.

An order should be entered in conformity with these views.

ORDER

OFFICE OF THE RAILROAD COMMISSION OF NEVADA,
CARSON CITY, March 24, 1914.

Present—H. F. Bartine, Chief Commissioner; J. F. Shaughnessy, First Associate Commissioner; W. H. Simmons, Second Associate Commissioner; E. H. Walker, Secretary.

Pursuant to the conclusions reached in the foregoing opinion, it is hereby

Ordered, That in lieu of the present charges for extensions of telephone service the Bell Telephone Company of Nevada shall charge no more than 50 cents per month for each separate extension within the same building or apartment.

[SEAL] H. F. BARTINE, *Chief Commissioner*,
J. F. SHAUGHNESSY, *First Associate Commissioner*,
W. H. SIMMONS, *Second Associate Commissioner*.

Attest: E. H. WALKER, *Secretary*.

Under date of April 16, 1914, the Commission received an application for rehearing from the defendant company, and the same was granted May 19, 1914, to take place May 25, 1914, in Carson City, Nevada. The date for rehearing was continued to June 19, 1914, and on that date the same took place. Appearances were made on behalf of the defendant company by James T. Shaw, counsel; C. B. Bush, assistant general manager; A. N. Hall, appraisal engineer; A. C. Stannard, acting general superintendent of traffic; J. P. Noble, district commercial superintendent;

R. N. Lake, manager of the local exchange in Reno, Nevada; and C. E. Fleager, division plant engineer.

After the rehearing the case was submitted to the Commission for decision with the understanding that the company would file certain data for the Commission's information. No appearances were made by complainant. At the time of closing this report, the decision on the rehearing has not been rendered, but will be entered at an early date.

Case No. 266—Beer Rates, Less Than Carload, Carson City to Thorne, Luning and Mina.

This case, entitled "Carson Brewing Company v. Virginia and Truckee Railway and Southern Pacific Company," the details of which are set forth on page 55 of the Commission's sixth annual report, was adjusted January 29, 1914, when the Commission was advised that the following less-than-carload rates would be published to cover beer moving from Carson City to Thorne, Luning, and Mina:

Carson City to Thorne.....	55 cents per cwt.
Carson City to Luning.....	60 cents per cwt.
Carson City to Mina.....	63 cents per cwt.

The rates were made effective March 25, 1914.

Case No. 268—Transfer Charges at Pioche.

Case No. 268, entitled "F. C. Richmond Machinery Company v. Pioche Pacific Railroad Company," the details of which will be found on pages 55 and 56 of the Commission's sixth annual report, was not acted on further during the year 1914, a satisfactory adjustment having evidently been made.

Case No. 269—Classification of Galvanized-Iron Air-Pipe Under Twelve Inches in Diameter.

This case, entitled "Nevada Freight Claim Bureau v. Southern Pacific Company," the details of which are fully set forth on page 56 of the Commission's sixth annual report, was closed during the year 1914, it having been found that rates had been properly applied by defendant company.

Case No. 270—Depot Site and Facilities at Verdi.

Case No. 270, entitled "Citizens of Verdi v. Southern Pacific Company," the details of which are set forth on page 56 of the Commission's sixth annual report, was heard in Verdi, Nevada, February 5, 1914.

Appearances were made on behalf of the defendant company by W. A. Whitney, superintendent of the Sacramento Division; W. H. Kirkbride, engineer, and G. D. Squires, counsel. At the hearing an agreement was reached between all parties, the Commission being given to understand that the Southern Pacific Company would erect a modern and commodious depot at the site desired by the complainants in the proceeding. The case was therefore dismissed with the understanding that construction of the depot would be commenced at the earliest date possible.

The Southern Pacific Company was unable to commence work on the building until the fall of the year. At the time of closing this report, the depot has been substantially completed, and is an excellent building.

Case No. 272—Charges Assessed Passengers Using Drawing-Rooms and Compartments in Pullman Cars.

Case No. 272, entitled "George Wingfield v. Southern Pacific Company, *et al.*," the details of which are set forth on page 57 of the Commission's

sixth annual report, was carried before the Interstate Commerce Commission under the title of "Railroad Commission of Nevada v. Southern Pacific Company, *et al*." (Docket No. 6489.)

The case was originally set for hearing to take place before the Interstate Commerce Commission in Reno, Nevada, on October 7, 1914, but as the members of this Commission were called to Chicago to give testimony in the intermountain cases, a continuance was asked and granted.

The proceeding was heard before Examiner Wood, at Reno, Nevada, on December 11, 1914, and Commissioners Bartine, Shaughnessy, and Simmons, and Attorney-General Thatcher appeared for the Commission. Messrs. George Wingfield, the original complainant in the case, and E. H. Walker, Secretary of the Commission, appeared as witnesses on behalf of the Nevada Commission. A large number of appearances were made on behalf of the defendant railroad companies. After the hearing all parties were given time in which to file briefs, and were notified that oral arguments would be heard by the Interstate Commerce Commission at Washington, D. C., February 11, 1915.

Case No. 273—Minimum Charges for the Movement of Less-than-Carload Freight Between Points in Nevada.

This case, entitled "Railroad Commission of Nevada v. Southern Pacific Company," the details of which will be found on page 57 of the Commission's sixth annual report, was heard by the Commission in Verdi, Nevada, February 14, 1914. Appearances were made on behalf of defendant by Messrs. G. D. Squires, attorney; W. A. Whitney, superintendent of the Sacramento Division; and S. N. Bostwick, assistant general freight agent, after the hearing the case was submitted to the Commission for decision.

On December 26, 1914, this case was dismissed, it having been found that the effect of the increases in minimum charge rates would be insignificant.

Case No. 274—Rate on Scrap Iron, Carloads, Dayton to Tonopah.

Case No. 274 entitled, "R. R. Newell v. Southern Pacific Company and Tonopah and Goldfield Railroad Company," the details of which are set forth on page 57 of the Commission's sixth annual report, was dismissed during the year. The defendant companies offered to establish a rate of \$7 per ton on scrap iron, carloads, from Dayton to Tonopah, Nevada, and complainant was so advised and asked whether such an adjustment would be satisfactory. Communications addressed to Mr. Newell never reached him, as he had evidently moved out of the State, leaving no forwarding address, and the case was therefore dismissed.

Case No. 276—Passenger-Train Service on the Eureka-Nevada Railway.

This case, entitled "E. T. Patrick v. Eureka-Nevada Railway," the details of which are set forth on page 58 of the Commission's sixth annual report, was disposed of January 16, 1914, the defendant agreeing to abide by the Commission's instruction relative to the stopping of trains at Blackburn, Nevada, giving passengers time in which to secure meals at that point during the noon hour.

Case No. 277—Passenger-Train Service on the Eureka-Nevada Railway.

This case, entitled "D. Van Gelder v. Eureka-Nevada Railway," was dis-

posed of in the same manner as Case No. 276, both proceedings relating to the same matter.

Case No. 278—Telephone Service at Hazen.

Case No. 278, entitled "F. M. Manson v. County Commissioners of Churchill County and Bell Telephone Company of Nevada," the details of which are set forth on page 58 of the Commission's sixth annual report, was dismissed January 3, 1914, on request of complainant, defendants having agreed to make satisfactory adjustment of the cases.

**CASES FILED WITH THE RAILROAD COMMISSION OF NEVADA
DURING 1914**

Case No. 279—Disregard of Crossing-Signals at Palisade.

January 3, 1914. Complaint filed by John Gernant against the Eureka-Nevada Railway Company, alleging that the defendant company had served notice that commencing Monday, December 29, 1913, at 8 a. m., it would disregard Southern Pacific Company crossing-signals at Palisade, Nevada, and asking the Commission to make an investigation of the same.

The Commission took the matter up with officials of both the Southern Pacific Company and Eureka-Nevada Railway, and under date of January 16, 1914, a letter was received from W. R. Scott, general manager of the Southern Pacific Company, advising that the following rules had been established to cover the situation:

Effective 6 p. m. Saturday, January 3, 1914, and until further notice, between hours of 6 p. m. and 7:15 a. m., trains of Eureka-Nevada Railway will not cross tracks of Southern Pacific Company until after order has been obtained from dispatcher of Southern Pacific Company.

If at any time order is given by dispatcher for Eureka-Nevada trains to cross, Southern Pacific train crews interested must be notified and stopped before passing over crossing during such period. Between hour of 7:15 a. m. and 6 p. m. all Southern Pacific trains must stop before passing over the crossing as at present.

Under date of January 23, 1914, complainant was notified of the adjustment and was asked whether the same was satisfactory. No reply being received to this communication and the Commission considering that the rules established would give adequate protection to the public and employees of the carriers, the case was closed.

Case No. 280—Loss of Property and Lifting of Annual Pass.

December 28, 1913. Complaint filed by William O'Brien against Las Vegas and Tonopah Railroad Company, alleging that the defendant company had confiscated certain property belonging to him and also that conductor on passenger train had lifted his annual pass at Beatty, Nevada, before he had completed trip Las Vegas to Beatty and return.

The officials of the defendant company were notified of this complaint and asked to investigate the same. The company stated that the property claimed by complainant, which consisted of tools, belonged to the Las Vegas and Tonopah Railroad Company, and that the annual pass had been taken from Mr. O'Brien for the reason he was traveling on same after having left the employment of the company. A letter was addressed to complainant under date of January 22, 1914, informing him of the position taken by defendant, and further that the Commission

was without any jurisdiction in the matter, having simply used its good offices in endeavoring to secure an adjustment.

Case No. 281—Loss of Part of Shipment of Bees, Oakley, Cal., to Wabuska, Nevada.

January 7, 1914. Complaint of H. C. Guild against the Southern Pacific Company, alleging loss of seventy stands of bees out of a one-hundred-stand shipment moving from Oakley, Cal., to Wabuska, Nevada. Although the Commission did not have the power to force the carrier to make reparation for loss or damage, the case was taken up informally with the defendant company, which was asked to make a thorough investigation of the same and adjust it if possible.

Under date of April 6, 1914, the Southern Pacific Company advised that it declined to make reparation to complainant for the reason that the shipment of bees had been improperly loaded by the consignor. The Commission so advised Mr. Guild on April 11, 1914, with the recommendation that he bring action in a court of competent jurisdiction if he still believed that he was entitled to damages.

Nothing further being heard from complainant, the case was dismissed.

Case No. 282—Exorbitant Telephone Charges.

December 27, 1913. Complaint of C. A. Howard against the Bell Telephone Company of Nevada, alleging that defendant company had forced him to sign a contract before giving telephone service at his residence in Reno, Nevada, and when he moved had informed him that it would cost \$3.50 to have the telephone moved to his new residence, and \$9 if he canceled the contract. This matter was immediately taken up with the defendant to the proceeding, and under date of January 8, 1914, complainant advised that the company had satisfactorily adjusted the same, and asked that the case be dismissed.

The case was formally dismissed January 22, 1914.

Case No. 283—Inspection of Tracks and Operation of Trains at Night Without Switch Lights.

January 10, 1914. Complaint of William O'Brien against the Las Vegas and Tonopah Railroad Company, which was referred to the Commission by the Attorney-General, alleging that the defendant company was operating trains at night without the use of switch lights, and also that the franchise of the company called for the daily inspection of tracks, which was not complied with by the defendant.

This matter was taken up for investigation by the Commission under date of January 22, 1914, and, as a result of such investigation, it was found that the company was making proper inspection of its tracks and operating no trains at night.

The case was therefore dismissed.

Case No. 284—Consolidation of Bullfrog-Goldfield Railroad Company and Las Vegas and Tonopah Railroad Company.

January 22, 1914. A petition was received from the Bullfrog-Goldfield Railroad Company stating that it was proposed to consolidate the company with the Las Vegas and Tonopah Railroad Company, and that the

owners of the properties, by such consolidation, desired to accomplish the following results:

1. That there would be but one railroad between Rhyolite, Beatty, and Goldfield.
2. That there would be a reduction of outstanding capital stock to the extent of a par value of \$2,000,000 and that \$1,640,000 general mortgage bonds would be converted into stock.
3. That the communities served by the existing railroads would continue to be served.
4. That no existing railroad connection beyond the line would be severed by the granting of the petition.

The petitioner asked that the proposed consolidation be approved by the Commission, and that a time and place be appointed for the hearing of the petition.

The Commission caused a copy of the petition and a notice of the time and place of hearing to be published in the Tonopah Bonanza and Goldfield Tribune for a period of ten days in order that any parties interested might appear and take part in the hearing.

The hearing took place at Carson City on February 4, 1914, appearances being made on behalf of the Bullfrog-Goldfield Railroad Company by Hoyt & Gibbons of Reno, and on behalf of the Las Vegas and Tonopah Railroad Company by C. O. Whittemore. No other appearances were entered.

On February 14, 1914, the Commission entered the following opinion:

[Case No. 284.]

BEFORE THE RAILROAD COMMISSION OF NEVADA

In the Matter of the Application of the Bullfrog-Goldfield Railroad to the Railroad Commission of Nevada for approval of a proposed consolidation of the Bullfrog-Goldfield Railroad and the Las Vegas and Tonopah Railroad, between the Towns of Beatty and Goldfield, in the State of Nevada.

The above-entitled matter came on regularly to be heard before the Railroad Commission of Nevada, on the 4th day of February, 1914, at 11 o'clock a. m., pursuant to notice of the petition therein, which notice was regularly and duly published in the Goldfield Tribune and the Tonopah Bonanza for the full period of ten days prior to the date of said hearing.

On behalf of the petitioner, and in support of said petition, appearance was made by Hoyt & Gibbons, attorneys, of Reno, Nevada, and on behalf of the Las Vegas and Tonopah Railroad, appearance was made by Mr. C. O. Whittemore, attorney at law, of Los Angeles, Cal.

There was offered in evidence, and placed on file by the attorneys for the petitioner, a consent to the approval of the petition and its subject-matter by the Las Vegas and Tonopah Railroad and the Tonopah and Tidewater Railroad.

Pursuant to the terms of the petition, the reports and the subject-matter and data contained therein of the various railroads affected, which reports are on file with the Commission, were by reference deemed to be made a part of the petition, and upon examination were found by the Commission to fully sustain the allegations and representations made in said petition.

From various matters which were presented to the Commission, and after due and full consideration thereof, it is the opinion of the Commission that the maintaining of two independent and competing lines of railroad between Beatty and Goldfield by the Bullfrog-Goldfield Railroad and the Las Vegas and Tonopah Railroad Companies has, for a long period prior to the filing of the petition, constituted a wasteful and unprofitable procedure on the part of both roads by reason of the extraordinary and unanticipated diminution of traffic which has occurred since these two roads were built.

At the time the building of the two roads in question was determined upon, the population of Rhyolite and Goldfield was at the maximum, mining activities

and new mining developments were at their height, and the field to be served appeared to be one which would for a very considerable length of time afford profitable passenger and freight business sufficient to justify the capital expenditure involved, but in the progress of time the mineral districts were found to be of such a limited character, both as to extent of new and profitable mining operations and their respective productive life, that a great decline has taken place in both population and mining operations, resulting in a consequent continual diminution in the traffic. The result has been that at the present time, and in all probability for an indefinite period in the future, there is not, and will not be, a sufficient traffic to justify the operation of more than one line of railroad between Beatty and Goldfield.

It was further shown to the satisfaction of the Commission that the district as a whole will continue to have the benefit of whatever advantage is derived from competitive conditions, for the reason that the Tonopah and Goldfield Railroad, in connection with the Southern Pacific, is a direct competitor, and likewise there will continue to be maintained the Las Vegas and Tonopah Railroad from Beatty to Las Vegas, where it connects with the San Pedro, Los Angeles and Salt Lake Railroad, and likewise from Beatty there will continue in operation the Tonopah and Tidewater Railroad, which at Ludlow connects with the Atchison, Topeka and Santa Fe Railroad, thus insuring to the district to be served full competitive conditions.

The Commission was further assured that, in the event of the consolidation sought, all of the communities served by the present railroads shall continue to be served, and that no existing railroad connections shall be severed.

The Commission is satisfied that in such circumstances as here exist it would be injurious instead of beneficial to the public to require a continuation of a ruinous double operation of two independent railroad lines, and that it would involve economic waste and general disadvantage to withhold the consent to the consolidation which is contemplated.

The Commission is of the opinion that under the powers conferred upon the State Railroad Commission as to intrastate regulation of common carriers, and under the powers which have been conferred upon the Interstate Commerce Commission in the regulation of interstate traffic, ample safeguards have been provided to secure to the public fair and just rates and conditions of service, and these powers will continue in the event of the consolidation of these roads to conserve, by their proper exercise, the public welfare in all respects.

It was further shown to the satisfaction of the Commission, by reference to the official railroad map and to the lines of railroad in question, that the proposed consolidation will dispense with the necessity of the maintenance and upkeep of those portions of both roads where the grades are heavy and the operation unduly expensive, and that the new line, made up from the lower and more practicable grades of both lines, will be in fact the best and most advantageous route for the service of the communities affected, and that the probable resulting traffic should yield a fair revenue at reasonable rates to the single line to be maintained.

It does not appear to the members of this Commission that the matter is one calling for a formal order. As we view it, no order could be made that would be enforceable, and the Commission should not put itself in the position of making a nonenforceable order. The most we can do is to give our approval to the proposed plan of consolidation, and we do so for the reason that, in our judgment, the best interests of both the roads and the communities to be served will be promoted thereby.

H. F. BARTINE, *Chief Commissioner*,
J. F. SHAUGHNESSY, *First Associate Commissioner*,
W. H. SIMMONS, *Second Associate Commissioner*.

Attest: E. H. WALKER, *Secretary*.
Carson City, Nevada, February 14, 1914.

The views and conclusions set forth in the foregoing opinion meet with our approval.

TASKER L. ODDIE, *Governor*.
GEO. B. THATCHER, *Attorney-General*.

The consolidation of the two roads took effect July 1, 1914.

Case No. 285—Overcharge on Express Shipment.

January 30, 1914. Complaint of W. B. Bergman & Co. of Ruth, Nevada, against Wells, Fargo & Company Express, alleging overcharge on shipment of elk's head from Rock Springs, Wyoming, to East Ely, Nevada.

Upon investigation the Commission found that a rate of \$13.50 per hundred pounds had been assessed, when the correct rate of \$6.75 per hundred should have been charged. The defendant company was so notified, and under date of May 4, 1914, the Commission was advised that the correct rate had been applied and refund made to complainant.

Case No. 286—Overcharge on Shipment of Beer Moving from Salt Lake City to Eureka.

February 9, 1914. Complaint received from the Salt Lake City Brewing Company against the Nevada Transportation Company, which operates the Eureka-Nevada Railway, alleging that claim for overcharge on shipment of beer moving from Salt Lake City, Utah, to Eureka, Nevada, had been declined by the defendant company for the reason that same had not been filed within sixty days in accordance with the provisions of the Nevada Transportation Company's local freight tariff.

A letter was written to the defendant company to the effect that the Commission considered the provision in the tariff requiring the filing of claims within sixty days after the delivery of shipments to be illegal, for the reason that shippers were entitled to correct rate applications even though an error in the application of a rate might not be discovered for a longer period of time.

The Nevada Transportation Company declined to consider the claim, quoting as its authority the order of the Interstate Commerce Commission requiring strict adherence to the provisions embodied in tariffs with respect to the time in which claims should be filed.

Under date of June 13, 1914, the Commission advised complainant to carry the matter before the Interstate Commerce Commission which had jurisdiction over the case, the shipment having been interstate in character.

Case No. 287—Notices to Consignors on Refusal of Consignees to Accept Freight Shipments.

February 11, 1914. This case was taken up by the Commission, on its own motion, with the Intermountain Demurrage Bureau, with a view to having the following rule established to govern carriers in giving notice to consignors in cases where consignees refused freight shipments:

Where a consignee shall give to the delivering carrier notice of his refusal to accept a shipment of freight properly tendered in pursuance of the bill of lading, the delivering carrier shall give to the consignor legal notice of such refusal, and if the consignor fails within.....days thereafter to give direction for the disposition of such goods, he shall henceforth become liable to such carrier for the usual storage charges, to the same extent, and at the same rate, as such charges are now, under like circumstances, by the rules of this Commission, imposed upon consignees who neglect or refuse, after notice of arrival, to remove freight of like character.

And where a consignee of freight either in carloads or less than carloads shall fail or neglect to remove such freight within.....days after the expiration of free time, then the carrier shall, through the agent at point of shipment, so notify the shipper, unless the consignee has signified his acceptance of the property. Said notice may either be served personally or given by mail.

No such notice to the consignor, however, shall be required of a carrier com-

pany where goods are shipped in less-than-carload lots, unless such goods, or the packages containing the same, or waybill, shall legibly bear the name and address of the consignor thereof.

A consignee who has once refused to accept a consignment of goods shall not thereafter be entitled to receive the same, except upon the payment of all charges for storage which would otherwise have accrued.

A rule similar to the above, but somewhat modified, was established by the Intermountain Demurrage Bureau, effective June 1, 1914, and as the same appears to meet all requirements in this State, no further action has been taken.

Case No. 288—Flour and Grain Rates, O. S. L. Points to Reno.

February 19, 1914. Complaint was received from the Riverside Mill Company of Reno, Nevada, against the Southern Pacific Company and Oregon Short Line Railroad, alleging that the two companies had made an average reduction in the rate on flour of 20 cents per hundred pounds on shipments moving from points on the Oregon Short Line Railroad to Reno and other Nevada points, while no corresponding reductions had been made on grain. Complainant further alleged that the reduced flour rates averaged only 15 cents per hundred pounds higher than the grain rates, which was not enough differential to enable complainant to compete with the Utah and Idaho flour-mills.

This matter was taken up with the officials of the defendant companies, who advised under date of March 12, 1914, that it would be useless to reduce the grain rates, for the reason that the Interstate Commerce Commission had, in all recent flour and grain cases, considered a differential of 7 cents per hundred pounds to be just and reasonable, and therefore, if the grain rates were reduced from Idaho and Utah points to Nevada points, the companies would undoubtedly be required to again reduce the flour rates on the basis of the above-named differential which would leave the Nevada mills in a worse position than at present, the differential being approximately 15 cents per hundred pounds.

Under date of March 31, 1914, complainant was advised of the position taken by defendants, and was asked what further action it desired taken.

Nothing further being heard from complainant, the case was dismissed.

Case No. 289—Party Rates, Elko to Ely and Return.

February 26, 1914. A complaint was received from Frank A. Swanger, principal of the Elko High School, against the Southern Pacific Company and the Nevada Northern Railway Company, alleging that party rate, for the Elko County High School athletic team had been requested by complainant, to cover transportation of the team from Elko, Nevada, to Ely, Nevada, and return, but through error request had been made of the wrong official, and in consequence the members of the team were forced to pay regular fares. It was further alleged that the defendant companies refused to make refund, and the Commission was requested to secure reparation.

The matter was taken up with officials of the Southern Pacific Company, who advised under date of March 10, 1914, that in all probability reparation would be made. A letter was received from complainant on March 24, 1914, stating that the matter had been adjusted satisfactorily.

Case No. 290—Party Rates on Southern Pacific Company's Line in Nevada.

March 15, 1914. A complaint was received from Salter & Robins of

Winnemucca, Nevada, against the Southern Pacific Company, asking that the defendant company be requested to establish a rate of one fare for the round trip for the transportation of athletic teams between points in the State of Nevada.

This question was taken up with the defendant company, and under date of March 30, 1914, the Commission was advised that the Southern Pacific Company had a uniform party rate of one fare and one-third for the transportation of parties consisting of fifteen persons or more when traveling together, and that it could not consistently name lower rates for athletic teams traveling between points in Nevada.

As rates of this nature are simply concessions made by carriers for the benefit of parties traveling together between various points, the Commission believed that it was without jurisdiction in the matter of compelling the Southern Pacific Company to grant lower party rates than were in effect at that time. Complainant was advised that, if desired, the Commission would endeavor to have the rates made applicable to parties of ten or more.

Nothing further being heard from complainant, the case was dismissed.

Case No. 291—Inadequate Accommodations on Southern Pacific Passenger Train No. 10.

March 16, 1914. A complaint was received from D. Van Gelder, the state president of the Travelers' Protective Association of America, against the Southern Pacific Company, alleging inadequate passenger accommodations furnished on defendant's Train No. 10 out of San Francisco to Reno, and points east thereof in Nevada. The Commission was asked to require the Southern Pacific Company to place an additional day coach on the train referred to.

This matter was taken up with the defendant company by the Commission, and under date of March 26, 1914, the Southern Pacific Company advised that, commencing at once, an extra coach would be handled on Train No. 10 between Oakland, Cal., and Ogden, Utah.

Complainant was so advised and the case closed.

Case No. 292—Violation of the "Headlight Law"

March 22, 1914. A complaint was received from the Brotherhood of Locomotive Engineers against the Western Pacific Railway Company, alleging violation of the law passed by the Legislature of 1913, commonly known as the "Nevada Headlight Law," and citing an instance wherein the defendant company had operated a locomotive backing up without displaying a headlight in the direction in which the locomotive was going.

Before this matter was taken up with the defendant railroad company, a letter was received from complainant asking that the complaint be dismissed, the Western Pacific Railway Company having agreed to comply with the law in the future.

The case was therefore dismissed April 8, 1914.

Case No. 293—Damages to Shipment in Transit, Angerton, Texas, to Reno.

March 25, 1914. A complaint was received from C. A. Scott of Reno, Nevada, against the Southern Pacific Company, alleging damages to shipment of household goods moving from Angerton, Texas, to Reno, Nevada, and asking that the Commission secure reparation for him.

This matter was taken up with officials of the defendant company, and under date of April 1, 1914, the Commission was advised that the

claim of complainant would receive prompt attention and investigation. Mr. Scott was so notified, and, nothing further being heard from him, it is believed that satisfactory adjustment was made.

Case No. 294—Full Fares Charged Children Entitled to Half-Fare Rates, Winnemucca and Fallon, to Carson City.

March, 26, 1914. A complaint was received from J. B. Mortsolf, superintendent of the Carson Indian School, against the Southern Pacific Company and Virginia and Truckee Railway, alleging that through error two full-fare tickets had been purchased at Winnemucca and two at Fallon to cover the transportation of Indian children to the Carson Indian School, near Carson City, Nevada. Complainant further alleged that he had made claim for the excess charges, and had furnished a certificate to the effect that the children were under 12 years of age, but that the Southern Pacific Company refused to make the refund, contending that there were legal objections to doing so.

The Commission took this question up with the officials of the defendant companies, stating that in its view the refunds should be made. Complainant later advised that a satisfactory adjustment had been made, the companies having granted the reparation on the basis of half-fares.

Case No. 295—Overcharge on Passenger Ticket Purchased, Lewiston, Idaho, to Ruth, Nevada.

March 10, 1914. A complaint was received from C. C. Chase of Ruth, Nevada, against the Oregon-Washington Railroad and Navigation Company, Oregon Short Line Railroad, Southern Pacific Company, and Nevada Northern Railway Company, alleging overcharge on first-class passenger-fare ticket purchased from Lewiston, Idaho, to Ruth, Nevada, to the extent of \$1.70, and asking that the defendant companies be required to make reparation.

Upon investigation it appeared that the Nevada Northern Railway Company had reduced its first-class passenger fare between Cobre and Ely from \$8 down to \$6.30, effective January 26, 1913, in compliance with an order issued by this Commission, but that through oversight the through rates from Lewiston, Idaho, to Ely and other points on the Nevada Northern Railway had not been adjusted until July 1, 1913. As complainant started his trip on June 30, 1913, he was forced to pay \$1.70 more than he would have had he commenced the trip the next day. In view of the fact that the reduced rate had become effective locally on the Nevada Northern Railway January 26, 1913, the Commission believed that Mr. Chase was entitled to the benefit of the lower rate, and so advised defendants.

The Commission was advised that the matter would be laid before the Interstate Commerce Commission in order to secure authority to make the refund.

Case No. 296—Class Rates Between Reno and Goldfield.

March 15, 1914. This case was taken up by the Commission on its own motion. The Southern Pacific Company and Tonopah and Goldfield Railroad Company were requested to blanket the class rates between Tonopah and Goldfield, Nevada, to cover the transportation of all freight moving under class rates between Reno and the points named—in other words, to adjust the rates so that the rate, Reno to Goldfield, Nevada, should not exceed the rate, Reno to Tonopah, Nevada.

After due investigation the Commission entered the following opinion on April 20, 1914:

[Case No. 294]

BEFORE THE RAILROAD COMMISSION OF NEVADA

RAILROAD COMMISSION OF NEVADA, *Complainant*,

v.

SOUTHERN PACIFIC COMPANY, and

TONOPAH AND GOLDFIELD RAILROAD COMPANY, *Respondents*.

In the Matter of Freight Charges Between Reno and McSweeney, Klondyke, and Goldfield, over the Southern Pacific Company's Lines, and the Tonopah and Goldfield Railroad Company, via Mina, Nevada.

OPINION

This matter has been under consideration by the Commission for some time, and has been made the subject of a number of conferences between the Commission and the traffic officials of the Southern Pacific Company and the Tonopah and Goldfield Railroad Company.

The question involved may be briefly stated as follows: On all freight shipped from San Francisco and other principal points on the Central Pacific Railway to Tonopah, McSweeney, Klondyke, and Goldfield, on the Tonopah and Goldfield Railroad, in Nevada, both the class and commodity rates are "blanketed"; that is to say, the rates are the same to all the points named. But, when the freight is moved from Reno, Nevada, to the same points, the charges are progressively higher to McSweeney, Klondyke, and Goldfield than to Tonopah. To illustrate: On first-class goods, the charge from San Francisco, Sacramento, etc., is uniformly \$2.40 per cwt., whether consigned to Tonopah, McSweeney, Klondyke, or Goldfield. When the same goods are shipped from Reno to the same points, the charges are: To Tonopah, \$1.55; to McSweeney, \$1.63; to Klondyke, \$1.73; and to Goldfield, \$1.84 per cwt. This lack of uniformity in adjustment is discriminatory against Reno in the rates to McSweeney, Klondyke, and Goldfield, besides being, in the judgment of the Commission, excessive *per se*. If freight rates can be blanketed between California points and the Nevada points named, this Commission is not able to see any good reason why the same method should not be used with respect to rates from Reno.

After careful investigation, it is believed by this Commission that the rates, both class and commodity, now in effect from Reno, on the line of the Central Pacific Railway, to Tonopah, on the Tonopah and Goldfield Railroad, will be just and reasonable to McSweeney, Klondyke, and Goldfield on the last-named road.

The two respondent companies are therefore directed to readjust their schedules in conformity with the views herein expressed, and authority is hereby given to make the required changes, upon one day's notice.

[SEAL]

Dated April 20, 1914.

RAILROAD COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

The opinion was complied with by the carriers, effective June 9, 1914, the reduction ranging from \$2.60 to \$5.80 per ton on all class-rate freight moving between Reno and Goldfield. The rates between Reno and McSweeney and Klondyke, Nevada, were reduced in like manner.

Case No. 297—Telephone Press Rates Between Reno and Carson City.

April 28, 1914. This case was taken up by the Railroad Commission with the Bell Telephone Company of Nevada, on request of the newspapers of Carson City, Nevada. It appeared that the newspapers were furnishing a bulletin service daily to the citizens of Carson City, being required to pay a rate of 20 cents for the first minute of service and 10 cents for each additional minute in securing the bulletins by telephone from Reno, Nevada. It was claimed that the rate was too high for the papers to continue the service, and as there was a popular demand for the daily bulletins a lower rate was asked.

The Commission advised the Bell Telephone Company of Nevada to establish a half-rate for press messages, similar to that established by the Western Union Telegraph Company.

Effective May 4, 1914, the company established a rate of 10 cents for the first minute of service and 5 cents for each additional minute for press telephone messages between Reno and Carson City, Nevada. This adjusted the case satisfactorily, and the case was closed.

Case No. 298—Rate on Scrap Iron, Carloads, Schurz to Tonopah.

May 3, 1914. A complaint was received from the Black Eagle Gold Mining Company against the Southern Pacific Company and Tonopah and Goldfield Railroad Company, alleging excessive rate in effect on scrap iron in carload lots, Schurz to Tonopah, Nevada, and asking for the establishment of a reasonable rate.

Upon investigation it was found that the rate in effect on this commodity between the points named was \$9.05 per ton. The Commission believed that a rate of \$4.25 per ton would be reasonable, and the defendant companies were asked to adjust the rate accordingly.

Effective July 23, 1914, the Southern Pacific Company and Tonopah and Goldfield Railroad Company established a joint rate of \$4.25 per ton, minimum carload weight 80,000 pounds, for the transportation of scrap iron, Schurz to Tonopah, Nevada.

The case having been satisfactorily adjusted, it was closed.

Case No. 299—Failure To Put in Culvert on Complainant's Property.

May 10, 1914. A complaint was received from W. L. McGregor of Blackburn, Nevada, against the Nevada Transportation Company, which operates the Eureka-Nevada Railway, alleging that the defendant company had refused to put a culvert on its right of way passing over his property, thereby preventing him from getting water from an irrigation ditch to his farm lands, and asking that the Nevada Transportation Company be required to put in the culvert desired.

Upon investigation it developed that the railroad company was willing to put in the culvert provided complainant paid all costs.

Under date of July 1, 1914, the Commission advised both parties to the proceeding to arrange for the installation of the culvert, each party to bear one-half of the expense, the total of which would not exceed \$50 according to the defendant company's estimate.

Nothing further being heard from either party, it is assumed that a satisfactory agreement was reached.

Case No. 300—First-Class One-Way Passenger Fares Between Points on Southern Pacific Company in Nevada.

May 12, 1914. This case was brought by the Commission on its own motion against the Southern Pacific Company, citation having been issued on the above-named date requiring the defendant company to appear and show cause why its first-class one-way passenger fares should not be reduced, and notifying the company to be prepared to make showings on the following basis:

First—A 3-cent-per-mile passenger fare upon the main line of the Central Pacific Railway Company in Nevada.

Second—A 3-cent-per-mile passenger fare upon the main line of the Central Pacific Railway Company in Nevada, together with the Nevada and California Railway, or the broad-gage portion thereof, in Nevada, considering both as one line.

Third—A 3-cent-per-mile passenger fare upon the main line of the Central Pacific Railway Company in Nevada, and a 4-cent-per-mile passenger fare upon the Nevada and California Railway, or the broad-gage portion thereof, in Nevada.

Fourth—A 2½-cent-per-mile passenger fare upon the main line of the Central Pacific Railway Company within the State of Nevada.

The date for hearing was set for June 11, 1914, to take place at Carson City, Nevada. This case covers the same questions as were involved in Case No. 155, entitled "Railroad Commission of Nevada v. Southern Pacific Company," which was dismissed, as the Federal Court held the procedure defective.

The date of hearing in this proceeding was postponed several times, mainly for the purpose of allowing the Southern Pacific Company to complete data relative to the valuation of its line of railroad in the State of Nevada, the Commission deeming it to be of great importance that such data should be submitted. Under date of July 24, 1914, the Western Pacific Railway Company requested permission to intervene in the case, which was granted by the Commission July 30, 1914.

The first hearing in this case took place in Carson City, Nevada, September 15, 1914, appearances being made on behalf of the Southern Pacific Company by H. C. Booth, general attorney; and Brown & Belford, attorneys at law of Reno. No appearances were made on behalf of the Western Pacific Railway Company. At the close of the hearing, the Commission ordered that further data be obtained by the defendant company to be submitted at a second hearing.

The second hearing in this proceeding took place December 7 and 8, 1914, appearances being made on behalf of both the Southern Pacific Company and Western Pacific Railway Company. At the close of this hearing the Commission stated that counsel for both companies would be allowed to file briefs, which were to be filed within a specified time after they received copies of the transcript of testimony.

At the time of closing this report the case is still pending.

Case No. 301—Overcharge on Shipment of Fuel Wood Moving from Verdi to Hudson.

May 15, 1914. A complaint was received from W. G. Wise of Hudson, Nevada, against the Southern Pacific Company and Nevada Copper Belt Railroad Company, alleging overcharge on a shipment of one carload of fuel wood moving from Verdi to Hudson, Nevada, the delivering carrier having assessed charges on the basis of 13.35 cords, instead of 10 cords as billed from point of origin and charged for by the Verdi Lumber Company, the consignor.

Upon investigation it appeared that the Verdi Lumber Company had loaded the car in question to its full-space capacity, the car having a cubical contents of 13.35 cords, but charged for 10 cords only, for the reason that in most instances the commodity settled rapidly in transit and its charges were generally based on the car and not by cordage. However, it further developed that the car was measured by the agent of the Southern Pacific Company at Wabuska, and it was found that it contained the cordage upon which charges were based.

The case was therefore dismissed June 29, 1914, complainant being notified that the correct charges had been assessed.

Case No. 302—Shipment Classified as Shavings, Which It Was Alleged Should Have Been Classified as Sawdust, Moving from Verdi to Tonopah.

May 19, 1914. On this date a notice of hearing was forwarded to representatives of the Southern Pacific Company, Tonopah and Goldfield Railroad Company, and Nevada Freight Claim Bureau, setting forth that a hearing would be held on June 6, 1914, in the matter of the complaint of the Nevada Freight Claim Bureau, alleging the wrongful designation of a commodity on shipment moving from Verdi to Tonopah, Nevada, May 10, 1907, which was classified as shavings and which it was alleged should have been classified as sawdust.

Previous to the forwarding of this notice, the Commission had made an informal ruling to the effect that the sawdust rate should have been applied, the ruling having been based on the request of the Nevada Freight Claim Bureau for the same, all of the correspondence on the subject having been submitted to the Commission in order that it might get the views of all parties. From the correspondence submitted, it appeared that the Tonopah and Goldfield Railroad objected to applying the sawdust rate, but was willing to lay the matter before the Commission for adjustment, while the Southern Pacific Company was agreeable to the application of the sawdust rate. It also appeared that the commodity had been used in the walls of the Nevada Packing Company's ice-house at Tonopah, Nevada. On the basis of the correspondence submitted the Commission came to the informal conclusion that the sawdust rate should have been applied.

A letter was received from the Tonopah and Goldfield Railroad Company objecting to the Commission's ruling, and asking for a hearing in the matter, which was immediately granted.

The hearing did not take place until June 13, 1914, at which appearances were made on behalf of the Nevada Freight Claim Bureau by H. C. Leavitt, and on behalf of the Tonopah and Goldfield Railroad by W. D. Forster, its traffic manager.

At the time of closing this report, the Commission has not entered a formal ruling on this question.

Case No. 303—Violation of the "Headlight Law" by the Southern Pacific Company.

June 25, 1914. A complaint was received from E. P. Carville, District Attorney of Elko County, against the Southern Pacific Company, alleging violations of the law passed by the 1913 Nevada Legislature, commonly known as the "Headlight Law," and citing a number of instances where the defendant company was operating engines with headlights of less than 1500-hundred-candle power.

A letter was addressed to Mr. Carville, stating that there were three methods by which this matter could be handled:

First—That the Commission could take the matter up for formal investigation and if it was found that the law in question was being violated an order could be entered requiring the defendant company to comply with it. However, the Commission considered that this would add

nothing to the effectiveness of the statute, which already imposed an obligation on the carrier.

Second—That the Commission could formally investigate, ascertain, whether the law had been violated, and, if so, place the matter in the hands of the Attorney-General.

Third—That the District Attorney or Attorney-General could institute proceedings in a court of competent jurisdiction on their own initiative, without laying the matter before the Commission at all.

It was believed that the third method of procedure was the best, for the reason that the case would be expedited in this manner, and results would be the same as though the matter were handled in any other way.

Nothing further being heard from Mr. Carville, it is believed that the method of procedure recommended by the Commission was followed, or that the matter has been satisfactorily adjusted.

Case No. 304—Charges Assessed Passengers Using Drawing-Rooms and Compartments in Pullman Cars.

July 24, 1914. A complaint was received from J. G. Crumley of Tonopah, Nevada, against the Southern Pacific Company and Pullman Company, alleging that any individual occupying a drawing-room was compelled to purchase two full-fare tickets, and any individual occupying a compartment in a Pullman car was compelled to purchase one full-fare ticket and one half-fare ticket, to cover his transportation between points in the State of Nevada. The Commission was asked to investigate the matter and enter an order prohibiting the defendant companies from assessing charges in this manner.

The questions involved in this proceeding are identical with those involved in Case No. 272, which is now pending before the Interstate Commerce Commission, except that this case relates to intrastate business in Nevada and the former case relates to interstate business. Case No. 272 is referred to elsewhere in this report.

On July 25, 1914, a citation was issued to the defendant companies requiring them to appear and answer the complaint on or before August 22, 1914. The answers were duly received.

Up to the present time the case has not been heard by the Commission, it being the consensus of opinion that all interests would be served best by not carrying the case further until the Interstate Commerce Commission had handed down its decision in Case No. 272.

Case No. 305—Installation of Cattle-Guards on Southern Pacific Right of Way near Churchill.

July 1, 1914. Complaint was received from A. A. Towle of Churchill, Nevada, against the Southern Pacific Company, alleging that the defendant company had not installed suitable cattle-guards on its right of way over complainant's property near Churchill, Nevada, and that of late several cattle had been killed by trains. The Commission was asked to compel the installation of proper cattle-guards.

This matter was taken up with the officials of the Southern Pacific Company, who advised under date of July 23, 1914, that arrangements had been made to install standard cattle-guards at the point named.

Complainant was so advised, and the case has been closed.

Case No. 306—Discontinuance of Railroad Service to Rhyolite.

July 21, 1914. A complaint was received from the citizens of Rhyolite against the Las Vegas and Tonopah Railroad Company, alleging that the defendant company had discontinued daily passenger-train service into and out of Rhyolite, Nevada, and asking that the company be compelled to continue to give daily service as heretofore.

After the exchange of numerous telegrams on this subject, the Commission was advised by the Las Vegas and Tonopah Railroad Company under date of July 29, 1914, that a conference had been held with the citizens of Rhyolite, Nevada, and that an agreement had been reached in which the company had promised to furnish semiweekly passenger-train service to and from Rhyolite.

Nothing further being heard from complainants, the Commission believed that the adjustment was satisfactory. On several occasions the citizens of Rhyolite had been advised that if the matter were not satisfactorily adjusted all that was necessary was for them to file a formal complaint, which would give the Commission power to enter an order requiring reasonable service after a regular hearing had been given to all parties concerned. No formal complaint was ever filed, and therefore no further action could be taken.

Case No. 307—Express Rate on Ice, Goldfield to Beatty.

July 30, 1914. A complaint was received from F. W. Lockman on behalf of the citizens of Rhyolite, Nevada, against the American Express Company, alleging that the defendant company proposed to increase the rate on ice from Goldfield to Beatty from 90 cents per cwt. to \$1.20 per cwt., and asking that the company be compelled to reestablish the old rate of 90 cents.

This matter was immediately taken up with the officials of the American Express Company, who advised under date of August 4, 1914, that the rate of 90 cents per cwt. would be reestablished between Goldfield and Beatty, Nevada, at once.

Complainant was so advised, and the case closed.

Case No. 308—Failure to Furnish Equipment on Nevada Copper Belt Railroad.

August 15, 1914. Complaint of S. W. Belford, on behalf of the Mason Valley Mines Company, against the Nevada Copper Belt Railroad Company, alleging that the defendant company had refused to furnish equipment for internal switching purposes at Thompson, Nevada. Complainant further alleged that the Nevada Copper Belt Railroad had canceled the average agreement relative to demurrage on cars. The Commission was asked to investigate the case and adjust the matters complained of.

These questions were taken up informally with the officials of the defendant company, who answered the Commission by declining to make any adjustments until the case was fully heard and determined. Complainant was advised to make formal complaint in the matter if he desired the case carried further.

Later it was agreed by counsel for the Nevada Copper Belt Railroad Company that the questions involved in this case might be considered by the Commission in connection with Case No. 225, entitled "Mason

Valley Mines Company v. Nevada Copper Belt Railroad Company," provided the Commission granted a rehearing in that proceeding.

The application for rehearing in Case No. 225 was denied, and therefore this case has not been considered formally.

Shortly after this the Mason Valley Mines Company shut down its plant and, up to the time of closing this report, the same has not reopened.

Complainant has not as yet filed a formal complaint.

Case No. 309—Fencing Right of Way.

August 17, 1914. A complaint was received from Manual Lovejoy of Dayton, Nevada, against the Southern Pacific Company, asking that defendant be compelled to fence its right of way over the complainant's property.

A letter was addressed to the attorney for complainant in this proceeding relative to the question of the Commission's jurisdiction over the question involved, and up to the time of closing this report no reply has been received.

Case No. 310—Rate on Empty Carriers, Returning, Eureka to Palisade.

August 21, 1914. A complaint was received from R. Zadow of Eureka, Nevada, against the Nevada Transportation Company, which operates the Eureka-Nevada Railway, alleging excessive rates for the transportation of empty packages, returning, Eureka to Palisade, Nevada, and asking that the defendant company be compelled to reestablish rate of 20 cents per cwt. which was in effect prior to July 1, 1914.

Upon investigation it appeared that, effective July 1, 1914, the Nevada Transportation Company increased the rate on this commodity between the points named from 20 cents per hundred to \$1, while the rate on the same commodity moving in the opposite direction was left at 20 cents.

A large amount of correspondence has been carried on regarding this case and the defendant company has offered to establish a rate of 50 cents per hundred to cover intrastate business only. As the bulk of this commodity moves to points outside of the State of Nevada, the proposed adjustment was not satisfactory.

At the time of closing this report, the Commission has decided to file a formal complaint with the Interstate Commerce Commission asking for an adjustment, and at the same time proposes to issue a citation to the defendant company requiring it to appear and show cause why the 20-cent-per-cwt. rate should not be reestablished for intrastate business.

Case No. 311—Party Fares Charged Passengers Traveling in Special Cars on the Tonopah and Goldfield Railroad.

August 5, 1914. A complaint was received from C. L. Erickson, manager of the Alabama Minstrels, against the Tonopah and Goldfield Railroad, alleging overcharge for the transportation of a party of twenty-five people traveling from Mina to Goldfield, Nevada, Goldfield to Tonopah, and Tonopah to Mina, Nevada, in a special car, and asking the Commission to secure reparation.

Upon investigation it was found that the defendant company had assessed fares totaling \$295 for the three movements, representing full first-class one-way charges. The tariff provisions covering the movement of parties of twenty-five or more in special cars are somewhat vague, and

several interpretations of the same could be made. The Commission came to the tentative conclusion, however, that the proper charges should have been \$236, and under date of August 25, 1914, the Tonopah and Goldfield Railroad Company was requested to refund the sum of \$59 to complainant.

Under date of August 27, 1914, the defendant company requested authority to refund the sum of \$96.25 to complainant, stating that it had been the intention to provide for the application of two-third fares for the transportation of parties of twenty-five or more in special cars, and that, in view of the fact that the tariff covering these provisions was open to more than one interpretation, the same would be reissued at an early date in order that there could be no question as to the proper application of the rates.

The defendant company was authorized to make refund of \$96.25 and complainant was so notified.

This adjustment being satisfactory, the case was closed.

Case No. 312—Overcharge on Shipment of Timbers, Moving from Verdi to Tonopah.

September 20, 1914. A complaint was received from the Verdi Lumber Company against the Southern Pacific Company and Tonopah and Goldfield Railroad Company, alleging overcharge on shipment of one carload of timbers, moving from Verdi to Tonopah, Nevada, on January 23, 1911, and asking that the defendant companies be required to make reparation.

It developed that complainant's contention was based on the fact that, effective November 20, 1910, the Commission had ordered into effect a rate of 25 cents per cwt. on timbers of certain specific dimensions moving from Verdi to Goldfield, Nevada, and intermediate points. This case was carried into the United States District Court of Nevada before the order became effective, and a temporary restraining order was issued against the Commission by that court. The case came up for hearing before the court on a motion for an injunction *pendente lite* early in February, 1911. On order of the court the temporary restraining order was dissolved, and the rates as ordered into effect by the Commission were duly published and filed by the defendant carriers on or about February 8, 1911, being made effective on or about the same date.

The case was then submitted on its merits to the court.

During the year 1913 the court dismissed the proceeding. It was found, therefore, that in dismissing the case the United States District Court had declared the order of the Commission to be just and reasonable, and it was the contention of the complainant in this case that the 25-cent rate per cwt. should have been applied on all shipments of timbers moving on or after the date the Commission's order had been made effective, namely, November 20, 1910.

This matter was taken up with officials of the defendant carriers, stating that the Commission believed that the rate as prescribed in its order in Case No. 120, entitled "Tonopah Lumber Company v. Southern Pacific Company, *et al.*," should have been applied on all shipments moving on or after November 20, 1910, and asking that the complainant's claim be adjusted accordingly.

At the time of closing this report, the case is still under consideration, some delay having been caused through loss of a part of the correspondence in the mails.

Case No. 313—Damage to Shipment of Personal Effects in Transit, Chicago, Ill., to Eureka, Nevada.

October 7, 1914. A complaint was received from Dr. A. R. Wittke of Eureka, Nevada, against the Nevada Transportation Company which operates the Eureka-Nevada Railway, alleging damages amounting to approximately \$12 to stove in transit from Chicago, Ill., to Eureka, Nevada, and asking that the defendant company be required to make reparation.

The officials of the defendant company were asked to investigate this matter and settle the claim if possible, which they declined to do. On October 22, 1914, complainant was notified as to the position taken by the Nevada Transportation Company, and advised to bring suit in a court of competent jurisdiction if he still thought he was entitled to reparation, the Commission having no direct jurisdiction over damage claims.

Case No. 314—Overcharges for Supplies Furnished Section Men on the San Pedro, Los Angeles and Salt Lake Railroad.

October 8, 1914. A complaint was received from J. H. Crews of Provo, Utah, against the San Pedro, Los Angeles and Salt Lake Railroad Company, alleging that supplies were being furnished by that company to section men in Nevada at excessive prices, and also that articles were supplied at short weights, the railroad company having given the contract for furnishing such goods to the Gunn Supply Company, although all charges for goods were deducted from the pay checks of section men by the railroad company.

The Commission found that it had absolutely no jurisdiction in this matter, and advised complainant under date of October 22, 1914, that his complaint was being referred to Professor S. C. Dinsmore, a member of the Nevada Department of Food and Drug Control and Weights and Measures, which had jurisdiction over questions of this nature.

Case No. 315—Application of Rates on Well-Boring Outfit Moving from San Jose to Fallon.

October 29, 1914. A complaint was received from W. D. Moody of Fallon, Nevada, against the Southern Pacific Company, alleging that the defendant company was endeavoring to collect from complainant additional charges on shipment of one well-boring outfit, knocked down, moving from San Jose, Cal., to Fallon, Nevada, January 17, 1914.

This matter was taken up with the Southern Pacific Company asking that the same be investigated, and the Commission was advised that charges had originally been assessed according to the classification and rates applicable to the knocked-down parts of the well-boring outfit, which made lower charges than should have been assessed. The company contended that the classification and rate applicable on well-boring outfits, knocked down, should have been applied instead of the rates applicable on individual parts of the outfit, for the reason that the shipment was covered by one bill of lading.

At the time of closing this report, the case is still under consideration.

Case No. 316—Weight Applied on Carload of Potatoes, Moving from an Idaho Point to Palisade.

November 10, 1914. A complaint was received from R. F. Raine of Palisade, Nevada, against the Oregon Short Line Railroad and Southern Pacific Company, alleging overweights on one carload of potatoes moving from an Idaho point to Palisade, Nevada, and stating that complainant believed shipper's weight should have been applied.

The Commission advised Mr. Raine that shippers' weights were never accepted by carriers where it was possible to obtain the scale weight, but that sometimes the railroad companies' scale weights were in error, and in order to be enabled to properly investigate this case, complainant was asked to forward the freight bill covering the shipment under consideration.

At the time of closing this report, nothing further has been heard from complainant.

Case No. 317—Stopping of Passenger Trains by Flag Signal at Acme Tank, Nevada.

November 12, 1914. A complaint was received from W. C. Greenman of Luning, Nevada, against the Southern Pacific Company, alleging that for a number of years the defendant company had stopped its passenger trains on flag at Acme Tank, Nevada, but that a ruling had recently been made by the operating department of the company to the effect that trains should not be stopped at that point in the future.

Complainant further alleged that there was a mining property being operated near Acme Tank, which paid considerable freight and passenger revenue to the Southern Pacific Company, and that, as the stopping of trains on flag was of great convenience to the parties operating and working at the mine, the Commission was requested to have the old order reestablished.

The matter was taken up with the Southern Pacific Company and under date of December 16, 1914 the Commission was advised that all passenger trains would be stopped at Acme Tank on flag to receive or discharge passengers, effective December 25, 1914.

Complainant was so advised, and the case was closed.

Case No. 318—Party Rates for Athletic Teams from Elko to Various Points and Return.

November 17, 1914. A complaint was received from George C. Jensen, principal of the Elko County High School of Elko, Nevada, against the Southern Pacific Company and Western Pacific Railway Company, alleging that applications had been made for party rates to cover the transportation of the Elko County High School athletic team to various points and return, but that such transportation was refused unless tickets were purchased for fifteen persons or more. The Commission was asked whether it was not possible to secure reduced rates for persons traveling in parties of less than fifteen.

Under date of November 19, 1914, complainant advised that the matter had been satisfactorily adjusted, and asked that the case be dismissed.

The case was therefore dismissed November 24, 1914.

Case No. 319—Passenger- and Freight-Train Service on the Nevada Central Railroad.

December 23, 1914. A complaint was received from W. H. Whitburn

& Son of Austin, Nevada, against the Nevada Central Railroad Company, alleging inadequate freight- and passenger-train service on the defendant company's line of railroad, and asking that the Commission investigate the matter and order improved service.

At the time of closing this report, the case is under investigation.

Case No. 320—Switching Service in Goldfield.

December 24, 1914. A complaint was received from the Verdi Lumber Company against the Bullfrog-Goldfield Railroad Company, alleging that for a number of years a spur track had been maintained to complainant's lumber yard in Goldfield, Nevada, and that a free switching service had been rendered between the defendant company's Goldfield station and the lumber yard. It was further alleged that at the time of consolidating the Bullfrog-Goldfield Railroad Company's line and the Las Vegas and Tonopah Railroad Company's line such switching service was discontinued, and that the defendant now proposed to tear up the spur to complainant's lumber yard. The Commission was asked to investigate this matter and refuse to allow the Bullfrog-Goldfield Railroad Company to tear up the spur track referred to, and also order that switching service be reestablished under the same conditions as existed prior to the consolidation of the two roads.

At the time of closing this report, this case is under investigation, and it is believed that a satisfactory adjustment will be made.

Case No. 321—Western Advanced Rate Cases.

December 25, 1914. A notice was received from Hon. Clifford Thorne, Chairman of the Board of Railroad Commissioners of Iowa, that Hon. F. A. Jones, Chairman of the Arizona Corporation Commission, had signed the complaint in the Western Advanced Rate Cases pending before the Interstate Commerce Commission, on behalf of the intermountain States, which made this Commission a party to the proceeding.

Upon investigation it was found that the advanced rates under consideration did not affect any rates to or from Nevada, although a number of the other intermountain States were affected. The Commission, however, has been asked to cooperate with the other States, and will therefore assist them in every way possible.

Case No. 322—Rates on Excess Baggage Valuation.

December 11, 1914. A complaint was received from D. Van Gelder, National Chairman of the Railroad Committee, Transcontinental Association District of the Travelers' Protective Association of America, against various railroads operating in Nevada, alleging excessive charges for the transportation of baggage of excess valuation, and asking that the Commission order in the same rates as had been ordered into effect by the Interstate Commerce Commission to cover interstate business in Case No. 5393.

The Commission took this matter up with the representatives of the various lines interested asking that the case be adjusted in line with complainant's request, in order that there might be uniformity in the interstate and intrastate regulations relative to the subject.

The case was adjusted by the carriers by establishing the following rules to take effect January 25, 1915:

If the passenger at the time of checking baggage declares according to the form prescribed by checking carrier a value greater than one hundred (\$100) dollars

for the baggage of an adult, or fifty (\$50) dollars for that of a child traveling on a half-ticket, or in case the weight of the baggage exceeds that allowed under the tariffs in connection with the transportation of a passenger, declares a value greater than 66 $\frac{2}{3}$ cents per pound, there will be an additional charge at the rate of 10 cents for each one hundred (\$100) dollars or fraction thereof above such agreed maximum values.

The minimum charge for increased valuation will be 10 cents.

Charges for declared excess valuation must be prepaid in cash (not in scrip) and excess baggage check issued showing declared value and amount collected.

These rules become effective on the date named to cover the intrastate transportation of baggage on the following railroads operating in the State of Nevada:

Atchison, Topeka and Santa Fe Railway Company, Coast Lines.
Bullfrog-Goldfield Railroad Company.
Las Vegas and Tonopah Railroad Company.
Nevada-California-Oregon Railway Company.
San Pedro, Los Angeles and Salt Lake Railroad Company.
Southern Pacific Company.
Tonopah and Goldfield Railroad Company.
Tonopah and Tidewater Railroad Company.
Western Pacific Railway Company.

The rulings became effective on interstate business to and from Nevada points December 31, 1914.

Case No. 323—Flour Rates from Kansas Points to Goldfield, Nevada.

November 19, 1914. This case was taken up on the basis of inquiry relative to the application of through flour rates from Kansas points to Goldfield, Nevada, which was received from C. V. Topping, secretary of the Southwestern Millers League of Wichita, Kans.

Upon investigation it was found, according to the provisions of the westbound transcontinental freight tariff applicable to shipments of this nature, that flour was carried at the commodity rate of 65 cents per cwt. to main-line junctions, such as Hazen, on the Southern Pacific Company, and Las Vegas, on the San Pedro, Los Angeles and Salt Lake Railroad, while to branch-line points such as Goldfield, Nevada, the class rate applicable was added to the main-line charges, but in no case did the tariff allow the application of the commodity rate from the main-line junction point. The only alternative was the application of commodity rates to the nearest Pacific Coast terminal plus either the class or commodity rate back to the branch-line point.

It was found that the lowest rate obtainable to Goldfield was \$1.50 per cwt., which was based on 65 cents from the Kansas point to either Sacramento or Los Angeles, plus 85 cents from those points to Goldfield. The rate on flour, carloads, from Hazen to Goldfield was 50 cents per cwt., which, added to the 65-cent through rate to Hazen, would make a combined rate to Goldfield of \$1.15 per cwt., but as the west-bound tariff did not provide for the application of the 50-cent commodity rate, the higher combined rate of \$1.50 governed.

This matter was taken up with the carriers party to the westbound tariff, who were asked to have the same amended so as to allow the application of the 50-cent commodity rate from Hazen to Goldfield, it being the opinion of the Commission that the lowest combination of rates should govern.

The Commission was advised by the Southern Pacific Company that steps had been taken to adjust the question in the manner suggested. In the future therefore, the through rate on flour, carloads, from Kansas points to Goldfield, Nevada, via Hazen, Nevada, will be \$1.15 per cwt.

This case was at first handled under a general file, and later was assigned a regular case number.

All of which is respectfully submitted.

H. F. BARTINE,
Chief Commissioner,
J. F. SHAUGHNESSY,
First Associate Commissioner,
W. H. SIMMONS,
Second Associate Commissioner.

E. H. WALKER, *Secretary.*

APPENDIX

ANNUAL REPORTS

OF THE

Railroads Operating in Nevada

**FOR THE YEARS ENDING JUNE 30, 1913, AND
JUNE 30, 1914**

CHARACTER OF CARRIER, AND NUMBER OF SHAREHOLDERS

Company	Character of carrier		Operated by		Number of share-holders	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	Operating	Operating	-----	-----	36,841	39,825
Bullfrog-Goldfield Railroad	Operating	Operating	-----	-----	8	8
Central Pacific Railroad	Not operating	Not operating	Southern Pacific	Southern Pacific	10	12
Eagle Salt Works Railroad	Operating	Operating	-----	-----	6	6
Eureka-Nevada Railway	Not operating	Not operating	-----	-----	6	6
Goldfield Consolidated M. & T. Co.	Operating	Operating	Nevada Tran. Co.	Nevada Tran. Co.	6	7
Las Vegas and Tonopah Railroad	Operating	Operating	-----	-----	8	8
Nevada-California-Oregon Railway	Operating	Operating	-----	-----	9	9
Nevada Central Railroad	Operating	Operating	-----	-----	14	14
Nevada Copper Belt Railroad	Operating	Operating	-----	-----	22	22
Nevada Northern Railway	Operating	Operating	-----	-----	10	10
Pioche Pacific Railroad	Operating	Operating	-----	-----	13	13
San Pedro, Los Angeles and Salt Lake Railroad	Operating	Operating	-----	-----	1	1
Silver Peak Railroad	Operating	Operating	-----	-----	15,767	26,969
Southern Pacific Company	Operating	Operating	-----	-----	61	61
Tonopah and Goldfield Railroad	Operating	Operating	-----	-----	8	8
Tonopah and Tidewater Railroad	Operating	Operating	-----	-----	15	15
Virginia and Truckee Railway	Operating	Operating	-----	-----	364	462
Western Pacific Railway	Operating	Operating	-----	-----	-----	-----
Totals	-----	-----	-----	-----	52,662	67,481

MILEAGE AND CAPITAL STOCK

Company	Total mileage operated		Nevada mileage owned		Total shares of capital stock authorized	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	8,237.55	8,339.72	11.60	11.60	3,814,860	3,814,860
Bullfrog-Goldfield Railroad	83.01	83.01	83.01	83.01	20,000	20,000
Central Pacific Railway	(*)	(*)	684.59	746.27	872,755	872,755
Eagle Salt Works Railroad	13.13	12.90	13.13	12.90	2,000	2,000
Eureka-Nevada Railway	84.00	84.00	84.00	84.00	250	250
Goldfield Consolidated M. & T. Co.	3.96	3.96	3.96	3.96	4,000	4,000
Las Vegas and Tonopah Railroad	200.46	200.46	200.46	200.46	40,000	40,000
Nevada-California-Oregon Railway	238.58	238.58	27.75	27.75	22,000	22,000
Nevada Central Railroad	43.30	43.30	43.30	43.30	7,500	7,500
Nevada Copper Belt Railroad	41.47	41.47	41.47	41.47	10,000	10,000
Nevada Northern Railroad	165.08	165.08	165.08	165.08	20,000	20,000
Pioche Pacific Railroad	1,131.80	1,131.80	267.10	267.10	25,000	25,000
Silver Peak Railroad	17.50	17.50	17.50	17.50	2,000	2,000
Southern Pacific Company	6,383.75	6,431.62	(c)	(c)	3,944,508	3,944,508
Tonopah and Goldfield Railroad	110.50	110.43	110.50	110.43	21,000	21,000
Tonopah and Prater Railroad	180.85	180.85	84.25	84.25	10,000	10,000
Virginia and Truckee Railroad	67.48	67.48	67.48	67.48	50,000	50,000
Western Pacific Railway	936.97	942.90	421.37	427.21	750,000	750,000
Totals	17,989.39	18,221.14	2,328.55	2,411.81	9,614,383	9,843,873

*The Central Pacific Railway operated no mileage.

†Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

‡The Southern Pacific Company owned no mileage in Nevada, but operated the Central Pacific Railway, for which mileage owned in Nevada is shown.

CAPITAL STOCK

Company	Total shares of capital stock outstanding		Capital stock — Total par value authorized		Capital stock — Total par value outstanding	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	3,050,805.30	3,100,555.30	\$381,486,000.00	\$381,486,000.00	\$305,080,530.00	\$310,055,530.00
Bullfrog-Goldfield Railroad.....	20,000	20,000	2,000,000.00	2,000,000.00	2,000,000.00	2,000,000.00
Central Pacific Railroad.....	846,755	846,755	87,275,500.00	87,275,500.00	84,675,500.00	84,675,500.00
Eagle Salt Works Railroad.....	2,000	2,000	200,000.00	200,000.00	200,000.00	200,000.00
Eureka-Nevada Railway ^a	25	25	25,000.00	25,000.00	2,500.00	2,500.00
Goldfield Consolidated M. & T. Co.	4,000	4,000	400,000.00	400,000.00	400,000.00	400,000.00
Las Vegas and Tonopah Railroad.....	15,000	15,000	1,500,000.00	1,500,000.00	1,500,000.00	1,500,000.00
Nevada-California-Oregon Railroad.....	22,000	22,000	2,200,000.00	2,200,000.00	2,200,000.00	2,200,000.00
Nevada Central Railroad.....	7,500	7,500	750,000.00	750,000.00	750,000.00	750,000.00
Nevada Copper Belt Railroad.....	10,000	10,000	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Nevada Northern Railway.....	20,000	20,000	2,000,000.00	2,000,000.00	2,000,000.00	2,000,000.00
Pioche Pacific Railroad.....	250,000	250,000	25,000,000.00	25,000,000.00	25,000,000.00	25,000,000.00
San Pedro, Los Angeles and Salt Lake Railroad.....	2,000	2,000	200,000.00	200,000.00	200,000.00	200,000.00
Silver Peak Railroad.....	2,726,724.06	2,726,724.06	374,451,800.00	394,450,800.00	272,672,405.64	272,672,405.64
Southern Pacific Company.....	21,500	21,500	2,150,000.00	2,150,000.00	2,150,000.00	2,150,000.00
Tonopah and Goldfield Railroad.....	10,000	10,000	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00
Tonopah and Tidewater Railroad.....	50,000	50,000	5,000,000.00	5,000,000.00	5,000,000.00	5,000,000.00
Virginia and Truckee Railway.....	750,000	750,000	75,000,000.00	75,000,000.00	75,000,000.00	75,000,000.00
Western Pacific Railway.....	7,808,309.36	7,860,559.36	\$884,138,300.00	\$884,387,300.00	\$780,880,985.64	\$786,055,985.64
Totals						

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

FUNDED DEBT

Company	Total par value of funded debt authorized		Total par value of funded debt outstanding		Funded debt—Interest accrued	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$546,473,500.00	\$514,973,500.00	\$322,439,045.00	\$316,469,045.00	\$13,521,770.76	\$12,624,789.06
Bullfrog-Goldfield Railroad	3,500,000.00	3,500,000.00	1,839,000.00	1,839,000.00	59,450.00	91,940.00
Centra Pacific Railway	223,301,897.79	223,301,897.79	300,013,397.79	200,214,397.79	8,761,172.41	8,734,574.43
Eagle Salt Works Railroad						
Florida Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	1,500,000.00	1,500,000.00	1,401,000.00	1,357,000.00	48,047.23	50,508.58
Nevada Central Railroad	750,000.00	750,000.00	750,000.00	750,000.00		
Nevada Copper Belt Railroad	1,000,000.00	1,000,000.00	622,000.00	622,000.00	37,320.00	37,320.00
Nevada Northern Railway	1,000,000.00	1,000,000.00	1,000,000.00	1,000,000.00	50,000.00	25,000.00
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	70,000,000.00	70,005,000.00	55,155,000.00	56,274,000.00	2,206,200.00	2,251,157.35
Silver Peak Railroad						
Southern Pacific Company	288,819,000.00	323,819,000.00	160,581,910.00	192,108,336.58	5,631,813.76	5,851,600.00
Tonopah and Goldfield Railroad	1,500,000.00	1,500,000.00	950,000.00	841,000.00	38,970.00	32,889.00
Tonopah and Tidewater Railroad	3,650,594.10	3,650,594.10	3,285,844.10	3,285,844.10	162,181.24	151,892.51
Virginia and Truckee Railroad						
Western Pacific Railway	75,000,000.00	75,000,000.00	75,000,000.00	75,000,000.00	3,750,000.00	3,750,000.00
Totals	\$1,217,094,991.89	\$1,265,799,991.89	\$823,041,686.89	\$849,790,123.47	\$34,249,925.40	\$33,601,650.98

FUNDED DEBT, AND CAPITAL STOCK AND FUNDED DEBT PER MILE OF ROAD

Company	Funded debt—Interest paid		Funded debt per mile of road		Capital stock per mile of road	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$13,669,210.87	\$12,628,972.08	\$29,980.00	\$29,230.00	\$28,366.00	\$28,687.00
Burlingame-Goldfield Railroad	6,490.00	10,336,063.21	22,446.00	22,446.00	24,411.00	24,411.00
Central Pacific Railway	6,971,886.87		82,206.00	88,184.00	39,034.00	37,274.00
Eastern Salt Works Railway					15,232.00	15,504.00
Eureka-Nevada Railway					30.00	30.00
Goldfield Consolidated M. & T. Co.					101,010.10	101,010.10
Las Vegas and Tonopah Railroad	49,275.00	49,650.00			7,528.00	7,528.00
Nevada-California-Oregon Railroad			5,872.00	5,814.00	9,221.00	9,221.00
Nevada Central Railroad	32,101.94	37,963.70	8,039.00	8,039.00	8,039.00	8,039.00
Nevada Copper Belt Railroad	80,000.00	25,000.00	15,692.82	15,153.00	24,113.82	24,113.00
Nevada Northern Railroad			6,068.00	6,067.00	12,115.00	12,114.00
Pioche Pacific Railroad						15,625.00
San Pedro, Los Angeles and Salt Lake Railroad	2,153,633.35	2,228,777.35	64,258.00	55,174.00	24,594.00	24,511.00
Silver Peak Railroad					11,428.00	11,428.00
Southern Pacific Company	5,468,633.00	5,505,097.00				
Tonopah and Goldfield Railroad	38,970.00	32,889.00	9,387.00	8,316.00	21,245.00	21,280.00
Tonopah and Tidewater Railroad	162,181.24	161,892.51	18,984.00	18,984.00	5,778.00	5,778.00
Virginia and Truckee Railway					74,096.00	74,096.00
Western Pacific Railway	3,750,000.00	3,750,000.00	80,127.00	79,559.00	80,045.00	79,542.00
Totals	\$32,341,971.07	\$34,746,324.85				

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

REPORT OF THE RAILROAD COMMISSION OF NEVADA

CAPITAL STOCK AND FUNDED DEBT PER MILE OF ROAD; AND ROAD AND EQUIPMENT INVESTMENT^a
BEFORE AND SINCE JUNE 30, 1907

Company	Capital stock and funded debt per mile of road		Total cost of road to June 30, 1907	Total cost of road since June 30, 1907	Total cost of equipment to June 30, 1907	Total cost of equipment since June 30, 1907
	1913	1914				
Atchison, Topeka and Santa Fe Railway.....	\$58,346.00	\$57,867.00	\$469,325,286.03	\$64,924,635.49		\$65,798,641.17
Bullfrog-Goldfield Railroad.....	46,867.00	46,867.00		3,642,078.29		146,698.77
Central Pacific Railroad.....	131,240.00	125,408.00	\$215,359,896.19	61,666,067.51		1,157,475.78
Eagle Salt Works Railroad.....	15,232.00	15,504.00	\$9,834.19		500.00	
Eureka-Nevada Railway ^b	30.00	30.00				12,032.36
Goldfield Consolidated M. & T. Co. Las Vegas and Tonopah Railroad.....	101,010.10	101,010.10				
Nevada-California-Oregon Railway.....	7,828.00	7,828.00	1,947,404.61	876,938.72	146,556.56	133,447.70
Nevada Central Railroad.....	15,035.00	15,035.00	2,655,638.55	1,151,020.55	95,518.37	187,379.07
Nevada Copper Belt Railroad.....	16,078.00	16,078.00	\$1,500,000.00			
Nevada Northern Railway.....	39,808.34	39,296.00		964,005.95	168,652.36	100,841.00
Noche Pacific Railroad.....	18,175.00	18,171.00	1,480,820.56	916,406.71		610,441.97
San Pedro, Los Angeles and Salt Lake Railroad.....	76,822.00	79,685.00		3,096.91		
Silver Peak Railroad.....	11,428.00	11,428.00	60,692,700.47	8,665,343.39	5,006,029.92	1,968,153.46
Southern Pacific Company.....				17,629,324.70		2,935,063.74
Tonopah and Goldfield Railroad.....	30,622.00	29,576.00	\$18,230,815.51	3,083,235.08	449,118.67	3,490.43
Tonopah and Tidewater Railroad.....	24,782.00	24,782.00	3,186,763.42	733,230.60	73,997.76	94,043.86
Virginia and Truckee Railroad.....	74,096.00	74,096.00	4,223,447.67	39,644.77	178,416.00	8,377.67
Western Pacific Railroad.....	160,172.00	159,101.00	101,941,621.78	36,531,034.47	1,699,563.56	2,206,946.60
Totals			\$903,616,464.06	\$198,373,701.21	\$7,718,372.20	\$65,433,442.14

^aIncludes both cost of road and equipment.^bFigures taken from report of Nevada Transportation Company which operates the Eureka-Nevada Railway.*Italic figures denote credit.*

ROAD AND EQUIPMENT INVESTMENT SINCE JUNE 30, 1907, AND TOTAL

Company	Total general expenses July 1, 1907, to June 30, 1913	Total general expenses July 1, 1907, to June 30, 1914	Investment since June 30, 1907		Grand total investment	
			1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$11,907.17	\$11,907.17	\$135,368,329.58	\$150,477,172.83	\$632,454,424.76	\$639,802,458.86
Bullfrog-Goldfield Railroad			3,793,161.18	3,787,717.06	3,793,161.18	3,787,717.06
Central Pacific Railroad	252,924.32	330,446.55	56,480,414.12	68,153,989.84	270,840,310.31	278,513,886.08
Eagle Salt Works Railroad				30,334.19	30,334.19	30,284.04
Eureka-Nevada Railway ^a			11,712.18	12,032.36	11,712.18	12,032.36
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	16,719.64	16,719.64	1,032,660.43	1,027,106.06	3,126,621.60	3,121,067.23
Nevada-California-Oregon Railroad	1,010.86	1,010.86	1,298,763.08	1,339,410.48	4,049,909.36	4,090,567.40
Nevada Central Railroad					1,500,000.00	1,500,000.00
Nevada Copper Belt Railroad	43,186.59	43,186.59	1,102,868.71	1,108,032.27	1,102,868.71	1,108,032.27
Nevada Northern Railroad	8,523.74	8,523.74	1,478,334.16	1,535,872.42	3,127,807.08	3,184,846.34
Pioche Pacific Railroad		693.22		8,790.13		8,790.13
San Pedro, Los Angeles and Salt Lake Railroad	69,370.90	69,370.90	10,091,834.66	10,692,867.75	76,790,565.06	76,391,598.14
Silver Peak Railroad			209,168.71	209,168.71	209,168.71	209,168.71
Southern Pacific Company	38,099.48	38,101.96	19,466,834.26	20,802,820.42	37,697,649.77	39,063,336.98
Tonopah and Goldfield Railroad			366,473.04	258,850.00	3,853,828.79	3,746,203.76
Tonopah and Tidewater Railroad	122,165.13	122,165.13	928,816.06	949,439.69	4,188,676.23	4,209,200.77
Virginia and Truckee Railroad			47,534.90	48,022.44	4,454,787.57	4,454,886.11
Western Pacific Railway	13,927,032.37	13,968,947.99	52,166,183.25	52,776,931.06	165,707,388.59	166,318,136.40
Totals	\$14,447,763.61	\$14,631,072.77	\$232,843,477.26	\$208,182,423.42	\$1,201,939,122.66	\$1,219,517,189.53

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**ROAD AND EQUIPMENT, RESERVE ACCRUED FOR DEPRECIATION, NET TOTAL INVESTMENT, AND
INVESTMENT PER MILE OF ROAD**

Company	Reserve accrued for depreciation		Net total investment		Investment per mile of road	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$16,203,017.28	\$18,876,342.45	\$617,251,407.47	\$620,926,116.41	\$57,732.15	\$57,688.71
Bullfrog-Goldfield Railroad	24,582.37	29,482.96	3,768,578.81	3,758,234.70	45,997.55	45,871.28
Central Pacific Railroad	847,393.31	6,433,871.84	269,992,917.00	272,060,014.19	124,463.14	119,768.82
Eagle Salt Works Railroad			30,334.19	30,264.04	2,310.30	2,304.95
Eureka-Nevada Railway ^a			11,712.18	12,032.96	139.43	143.24
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	46,057.82	52,015.48	3,080,563.78	3,069,051.75	15,460.02	15,402.25
Nevada-California-Oregon Railway	129,020.66	156,845.28	3,920,868.29	3,894,722.12	18,434.27	18,492.25
Nevada Central Railroad	5,638.00	3,787.35	1,494,462.00	1,496,212.65	18,017.81	18,038.00
Nevada Copper Belt Railroad	18,201.44	27,603.24	1,064,667.27	1,060,629.03	28,155.47	28,066.57
Nevada Northern Railroad	486,470.23	590,600.18	2,641,336.86	2,694,346.16	16,713.78	16,713.78
Noche Pacific Railroad				3,790.13		238.88
San Pedro, Los Angeles and Salt Lake Railroad	1,112,840.79	1,220,069.04	74,677,724.26	75,171,506.10	74,496.57	74,496.57
Silver Peak Railroad			295,163.71	295,163.71	11,962.50	11,962.50
Southern Pacific Company	6,155,678.11	6,452,231.42	31,541,971.66	32,531,044.51	864,049.51	868,089.50
Tonopah and Goldfield Railroad	196,781.87	185,860.34	3,667,044.92	3,660,843.41	36,136.81	35,210.56
Tonopah and Tidewater Railroad	31,240.16	36,516.84	4,157,356.06	4,172,683.93	24,022.51	24,111.20
Virginia and Truckee Railroad	35,667.88	48,039.92	4,419,123.69	4,406,825.19	65,487.99	65,305.65
Western Pacific Railroad	120,662.50	186,819.71	165,586,826.09	156,132,816.69	166,083.17	166,567.36
Totals	\$24,413,062.41	\$34,297,485.45	\$1,177,526,069.25	\$1,185,219,704.08		

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

INCOME ACCOUNT

Company	Operating revenues		Operating expenses		Net operating revenue or deficit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$88,080,754.41	\$83,540,283.19	\$63,880,682.73	\$60,172,701.00	\$34,200,071.68	\$33,367,567.19
Burlington Railroad	95,033.69	84,972.36	92,786.83	91,806.08	6,247.86	6,335.68
Central Pacific Railway	602.32	1,499.25	8,560.76	1,313.86	2,958.43	185.40
Eagle Salt Works Railroad	55,889.01	54,612.45	45,416.76	37,467.58	10,472.26	17,154.86
Eureka-Nevada Railway ^a	87,547.77	89,817.75	23,821.68	27,860.67	58,526.09	61,688.78
Goldfield Consolidated M. & T. Co.	186,713.09	194,883.17	131,686.45	139,525.40	5,208.54	5,353.77
Las Vegas and Tonopah Railroad	403,979.10	367,286.61	233,632.40	238,154.75	120,346.70	69,063.06
Nevada California-Oregon Railway	84,979.36	148,186.96	47,413.66	38,724.78	115,764.30	10,338.20
Nevada Central Railroad	223,876.82	145,681.18	110,106.57	92,617.85	115,767.25	70,268.30
Nevada Copper Belt Railroad	1,644,686.66	1,711,866.93	797,533.76	926,179.84	847,064.91	885,189.37
Nevada Northern Railroad	13,324.19	13,324.19	6,810,510.95	7,214,709.84	3,141.81	3,141.81
Rocky Mountain Railroad	10,288,049.98	10,636,171.18	6,810,510.95	7,214,709.84	3,427,538.98	3,411,461.34
San Pedro, Los Angeles and Salt Lake Railroad	19,915.79	12,557.43	19,517.17	11,954.71	1,398.62	1,962.87
Silver Pacific Railroad	96,325,314.06	92,038,093.43	54,671,463.80	54,931,540.17	40,653,850.26	37,046,549.26
Southern Pacific Company	698,367.71	638,948.93	371,084.99	410,875.73	327,282.72	277,976.10
Tonopah and Goldfield Railroad	329,240.57	340,629.21	191,691.47	204,737.17	137,549.10	135,891.04
Tonopah and Tidewater Railroad	369,808.18	270,653.89	213,912.05	206,147.69	155,896.13	64,404.26
Virginia and Truckee Railway	6,173,628.29	6,099,573.37	4,478,835.06	4,906,591.64	1,694,793.23	1,108,631.73
Western Pacific Railway						
Totals	\$213,944,023.37	\$206,398,305.28	\$132,181,400.45	\$129,923,809.04	\$81,762,622.92	\$76,474,496.24

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.*Italic figures denote deficit.*

INCOME ACCOUNT

Company	Outside operations— Revenues		Outside operations— Expenses		Outside operations— Net revenues or loss	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad						
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	\$5,670.55	\$5,251.10	\$6,029.85	\$4,225.99	\$359.40	\$1,025.11
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	204,925.55	196,896.60	224,987.19	231,725.56	\$20,071.64	\$5,328.96
Silver Peak Railroad						
Southern Pacific Company	11,631,296.59	11,003,236.32	10,029,112.80	10,116,237.57	1,602,186.79	886,988.75
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad		2,619.52		8,431.00		811.48
Virginia and Truckee Railway						
Western Pacific Railway	168,967.07	151,563.96	180,602.35	178,716.22	11,635.28	\$7,152.26
Totals	\$11,910,861.76	\$11,359,067.50	\$10,440,742.29	\$10,534,396.34	\$1,470,119.47	\$824,731.16

Italic figures denote deficit.

INCOME ACCOUNT

Company	Total net revenue or deficit		Taxes accrued		Operating income or loss	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$34,260,071.68	\$33,367,557.19	\$4,067,431.90	\$4,773,440.87	\$30,192,639.78	\$28,594,126.32
Bullfrog-Goldfield Railway	6,247.86	6,335.63	1,812,322.78	8,307.92	1,121.24	14,641.60
Central Pacific Railway	2,943.43	185.40	1,103.85	123.60	3,063.43	61.80
Eureka-Nevada Railway ^b	10,482.26	17,154.90	15,719.70	2,210.54	9,378.41	14,944.38
Goldfield Consolidated M. & T. Co.	58,526.09	61,536.88	15,719.70	472.68	58,068.41	61,164.20
Las Vegas and Tonopah Railway	5,206.64	5,353.77	18,841.32	19,987.41	10,513.06	14,613.64
Nevada-California-Oregon Railway	119,987.30	70,090.17	3,696.35	20,987.69	101,145.96	49,102.48
Nevada-Central Railway	7,554.30	10,062.20	11,174.39	4,633.46	3,865.96	5,428.75
Nevada-Copper Belt Railway	115,770.96	70,233.30	77,349.54	7,327.71	104,696.56	62,965.69
Nevada Northern Railway	847,064.91	835,489.37	77,349.54	81,242.29	769,705.37	754,247.08
Pioche Pacific Railway	3,407,467.34	3,144.31	437,596.17	370.40	2,969,871.17	2,773.91
San Pedro, Los Angeles and Salt Lake Railroad	701.33	3,376,132.38	776.41	532,484.18	2,843,648.20	2,843,648.20
Silver Peak Railroad	42,166,006.97	712.87	186,523.12	734.83	41,979,483.85	32,298,529.68
Southern Pacific Company	325,312.72	37,983,947.01	27,746.50	5,640,617.33	297,566.22	247,082.10
Tonopah and Goldfield Railroad	136,549.10	277,976.10	15,462.42	30,944.00	121,066.68	116,200.37
Tonopah and Tidewater Railroad	86,966.13	134,879.56	21,010.19	18,679.19	65,956.94	43,408.23
Virginia and Truckee Railway	1,683,157.95	64,406.20	278,096.13	20,997.97	1,405,061.82	697,270.07
Western Pacific Railway		1,076,529.47		379,259.40		
Totals	\$53,232,742.39	\$77,236,227.40	\$5,170,511.77	\$11,542,801.46	\$78,062,230.62	\$75,756,425.94

^aNot taken into account in totals as the Central Pacific Railway Company is a nonoperating carrier, and the account should show as a debit in the net corporate income and not in the operating income.

^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

Italic figures denote deficit.

INCOME ACCOUNT
OTHER INCOME

Company	Rents from lease of road		Hire of equipment		Joint facilities	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						\$370,275.66
Bullfrog-Goldfield Railroad					\$327,533.99	5,633.81
Centre Pacific Railway					5,668.02	
Eagle Salt Works Railroad						
Florida Nevada Railway	\$14,141,294.86	\$19,599,342.21	\$369,926.86	\$1,054,493.73		
Goldfield Consolidated M. & T. Co.			4,486.58	4,830.53		
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway						
Nevada Central Railroad			500.49	687.36		
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
Pioche Pacific Railroad					1,032.36	1,238.14
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company	1,193,834.66	1,366,646.59		487,650.03	313.00	331,713.18
Tonopah and Goldfield Railroad						304.50
Tonopah and Tidewater Railroad						
Virginia and Truckee Railroad						
Western Pacific Railway					83.28	124.92
Totals	\$15,835,129.52	\$11,965,968.80	\$874,913.93	\$1,547,661.65	\$334,730.65	\$769,410.21

INCOME ACCOUNT
OTHER INCOME

Company	Miscellaneous rents		Separately operated properties—Profit ^a		Dividends on stocks controlled	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$44,994.06	\$92,669.70	\$4,272,076.10	\$3,442,061.86	\$100,196.00	\$70,680.64
Bullfrog-Goldfield Railroad						
Central Pacific Railway	190,691.60	10.00		78,688.42		
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	500.00	500.03				
Nevada-California-Oregon Railway	2,176.60	2,321.16			380.00	
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad		190.00	13,339.49	12,234.47		
Silver Peak Railroad						
Southern Pacific Company		172,655.14	1,816,717.09	2,298,765.40	21,279,768.89	36,388,178.04
Tonopah and Goldfield Railroad	619.17	770.83	676.42	868.68		
Tonopah and Tidewater Railroad				10.00		
Virginia and Truckee Railroad	579.75	727.25				
Western Pacific Railway	23,447.34	27,497.17				
Totals	\$192,907.32	\$297,181.27	\$6,102,869.10	\$5,815,548.73	\$21,380,293.89	\$36,428,808.68

^aUnder heading of "Separately Operated Properties—Profit," is included the revenue from income entitled "Net Profit from Miscellaneous Physical Properties."

**INCOME ACCOUNT
OTHER INCOME**

Company	Interest accrued on funded debt owned or controlled		Interest on other securities, loans and accounts		Miscellaneous incomes	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$430,351.22	\$476,639.59	\$992,337.64	\$473,704.59	\$449,844.47	\$551,355.70
Bullfrog-Goldfield Railroad.....	8,150.00	8,150.00	1,403,344.27	755,335.86	515,663.10	322,919.47
Central Pacific Railroad.....	.....	.....	.....	.....	8,066.43	899.03
Eagle Salt Works Railroad.....	.....	.....	.....	.....	2,847,639.46	904,046.22
Eureka-Nevada Railway.....	.....	.....	.....	.....	.....	.....
Goldfield Consolidated M. & T. Co.....	.....	.....	.....	.....	.....	.....
Las Vegas and Tonopah Railroad.....	.....	.....	.....	.....	.....	.....
Nevada-California-Oregon Railway.....	.....	.....	436.44	1,069.69	415.15	1,819.86
Nevada Central Railroad.....	.....	.....	.....	.....	.....	.....
Nevada Copper Belt Railroad.....	.....	.....	.....	.....	.....	.....
Nevada Northern Railroad.....	.....	.....	10,421.88	13,862.63	.....	4,791.53
Pioche Pacific Railroad.....	.....	.....	.....	.....	.....	850.17
San Pedro, Los Angeles and Salt Lake Railroad.....	17,120.00	17,120.00	12,849.38	9,455.91	1,996.26	.....
Silver Peak Railroad.....	.....	.....	.....	.....	.....	.....
Southern Pacific Company.....	7,368,283.96	7,354,123.78	.....	486,111.72	.....	4,097.00
Tonopah and Goldfield Railroad.....	.....	.....	16,137.69	16,800.80	.....	.....
Tonopah and Tidewater Railroad.....	.....	.....	20,069.96	252.12	.....	.....
Virginia and Truckee Railroad.....	.....	.....	1,903.61	1,916.57	.....	.....
Western Pacific Railroad.....	.....	.....	26,504.73	4,688.48	.....	15,000.00
Totals.....	\$7,823,905.18	\$7,856,083.37	\$2,484,496.50	\$1,772,298.37	\$3,823,624.37	\$1,805,780.98

^aMiscellaneous income includes: Income from Sinking and Other Reserve Funds; Release of Premiums on Funded Debt; Contributions from Other Companies; and Miscellaneous Income.

^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

Company	OTHER INCOME AND DEDUCTIONS FROM GROSS		INCOME ACCOUNT		CORPORATE INCOME		Rents accrued for lease of other roads	
	Total other income		Gross corporate income or loss					
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$7,487,859.34	\$6,531,731.37	\$37,680,499.12	\$35,125,857.69	\$1,238,133.00	\$1,347,411.15		
Bullfrog-Goldfield Railroad	10,154.60	10,524.34	9,033.36	4,717.26				
Central Pacific Railway	16,189,043.73	11,759,385.96	14,376,720.95	11,759,385.96	31,134.93			
Eagle Salt Works Railroad		10.00	5,063.43	71.80				
Eureka-Nevada Railway ^a	8,066.43	899.03	17,444.84	15,843.39				
Goldfield Consolidated M. & T. Co.	2,847,639.46	904,048.22	2,905,692.87	965,212.42	21,244.87	25,040.68		
Las Vegas and Tonopah Railroad	500.00	500.03	10,015.06	14,713.61				
Nevada-California-Oregon Railway	3,442.43	4,098.20	104,588.41	53,200.68				
Nevada Central Railroad	415.15	1,819.86	4,271.10	7,248.61				
Nevada Copper Belt Railroad			104,596.56	62,965.59				
Nevada Northern Railway	10,421.88	13,862.63	780,127.25	768,109.71				
Pioche Pacific Railroad		4,791.53		7,565.44				
San Pedro, Los Angeles and Salt Lake Railroad	46,397.49	41,068.69	3,016,268.66	2,884,736.89				
Silver Peak Railroad			1,477.79	\$1.96				
Southern Pacific Company	31,658,604.60	48,916,940.88	73,638,088.45	81,210,270.56	39,552,133.74	31,777,863.79		
Tonopah and Goldfield Railroad	17,746.18	18,759.71	315,312.40	285,791.81				
Tonopah and Tidewater Railroad	20,059.96	282.12	141,125.64	116,462.49				
Virginia and Truckee Railway	2,483.36	2,643.82	68,469.30	46,062.06				
Western Pacific Railway	50,035.35	47,310.57	1,455,097.17	744,580.64				
Totals	\$58,352,969.96	\$68,258,676.96	\$134,602,777.80	\$134,015,102.90	\$40,842,646.54	\$33,150,315.62		

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Hire of equipment		Joint facilities		Miscellaneous rents	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway			\$558,617.61	\$558,549.18	\$92,482.76	\$61,902.68
Burlingame-Goldfield Railroad			313.00	304.50		
Central Pacific Railway					74,611.23	
Eagle Salt Works Railway						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad			43.00	516.00		
Nevada-California-Oregon Railway	\$1,979.83	\$962.04				211.71
Nevada Central Railroad					214.00	
Nevada Copper Belt Railroad	2,794.21	657.98				
Nevada Northern Railway	21,841.42	28,177.09	1,042.35	1,531.03		
Pioche Pacific Railroad	161,997.20	110,412.41	190,987.80	209,728.74	25.00	1,230.00
San Pedro, Los Angeles and Salt Lake Railroad						
Salt Lake and Great Salt Lake Railway						
Southern Nevada Railway	3,237.71	7,068.13	4,633.63	319,841.64	423,014.98	490,824.21
Tonopah and Goldfield Railroad	6,704.86	12,056.95	5,674.18	4,662.22	2.00	2.00
Tonopah and Tidewater Railroad	6,013.64	6,448.44		5,698.81		
Virginia Trucking Railway	302,281.67	300,868.16	57,093.03	60,569.66	47,778.60	49,657.94
Western Pacific Railway						
Totals	\$496,860.56	\$460,742.10	\$818,404.60	\$1,156,499.76	\$638,128.57	\$603,828.54

**INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME**

Company	Separately operated prop- erties—Loss		Interest accrued on funded Debt		Other interest	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....		\$45,745.03	\$13,521,770.76	\$12,624,769.06	\$1,331.75	\$515.37
Bullfrog-Goldfield Railway.....			52,450.00	91,940.00	19,649.32	21,066.93
Central Pacific Railway.....			8,761,172.41	8,734,574.43		
Eagle Salt Works Railway.....	\$5,739.40				1,806.98	2,502.28
Eureka-Nevada Railway.....						
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....						
Nevada-California-Oregon Railway.....						
Nevada Central Railroad.....			48,047.23	50,508.58	29,678.97	32,380.37
Nevada Copper Belt Railroad.....			37,320.00	38,281.42	5,964.70	4,142.33
Nevada Northern Railway.....			50,000.00	25,000.00	18,415.10	15,643.84
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....			2,206,200.00	2,251,157.35	51,370.71	19,123.09
Silver Peak Railroad.....						
Southern Pacific Company.....	19,625.10		5,656,188.76	6,310,240.00	1,648,641.45	1,044,869.30
Tonopah and Goldfield Railroad.....			38,970.00	32,889.00	10.91	4.05
Tonopah and Tidewater Railroad.....			182,181.24	151,892.51		
Virginia and Truckee Railway.....						
Western Pacific Railway.....			3,752,281.25	3,752,774.98	681,804.33	819,788.44
Totals.....	\$25,364.50	\$45,745.03	\$34,376,581.65	\$34,064,027.33	\$2,458,676.22	\$1,960,066.00

*Includes net loss on miscellaneous physical properties.

INCOME ACCOUNT
DEDUCTIONS FROM GROSS CORPORATE INCOME

Company	Miscellaneous tax accruals		Other deductions ^b		Total deductions from gross corporate income	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$337.83	\$81.76	\$124,816.67	\$320,639.89	\$15,537,490.38	\$14,964,614.10
Bullfrog-Goldfield Railroad					72,412.32	113,331.43
Central Pacific Railway		291,519.05	1,027,065.04		9,893,723.01	9,026,093.48
Eagle Salt Works Railway					1,806.98	2,502.28
Eureka-Nevada Railway					21,244.87	25,040.68
Goldfield Consolidated M. & T. Co.			798,840.33	857,577.81	798,840.83	857,577.81
Las Vegas and Tonopah Railroad					31,701.80	33,868.41
Nevada-California-Oregon Railway		171.00	278.90	83.34	54,504.83	55,116.96
Nevada Central Railroad					58,529.31	54,583.24
Nevada Copper Belt Railroad					72,883.77	48,708.12
Nevada Northern Railway						1,442.80
Pioche Pacific Railroad	46,480.00	81,480.76	29,025.59	31,796.74	2,676,086.30	2,704,927.09
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad			113,221.80	901,609.17	47,412,825.83	40,845,348.11
Southern Pacific Company	111.00	180.15			46,965.25	44,805.55
Tonopah and Goldfield Railroad					166,287.53	171,362.66
Tonopah and Tidewater Railroad		8.90	1,707.23	1,705.59	6,013.64	6,448.44
Virginia and Truckee Railway						
Western Pacific Railway			2,312.50	181,438.29	4,843,551.38	5,165,186.47
Totals	\$46,928.83	\$373,441.62	\$2,097,268.56	\$2,296,298.63	\$31,700,850.03	\$74,110,949.63

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

^bOther deductions include the following accounts: Amortization of Discount on Funded Debt; Transfer of Income to Other Companies; and Miscellaneous Deductions.

**INCOME ACCOUNT
NET CORPORATE INCOME AND DISPOSITION OF NET INCOME**

Company	Net corporate income or loss		Dividends declared on preferred stock		Dividends declared on common stock	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$22,143,008.74	\$20,171,243.59	\$5,708,690.00	\$5,708,690.00	\$10,388,780.00	\$11,691,750.00
Bullfrog-Goldfield Railroad	65,378.96	117,443.69	-----	-----	-----	-----
Central Pacific Railroad	4,476,997.94	2,753,232.48	-----	-----	-----	-----
Eagle Salt Works Railroad	4,877.41	2,450.43	-----	-----	-----	-----
Eureka-Nevada Railroad	3,800.03	9,197.29	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.	2,106,632.04	107,634.61	-----	-----	-----	-----
Las Vegas and Tonopah Railroad	41,714.86	47,972.02	-----	-----	-----	-----
Nevada-California-Oregon Railroad	50,083.68	1,916.23	-----	-----	-----	-----
Nevada Central Railroad	4,271.10	7,243.61	-----	-----	-----	-----
Nevada Copper Belt Railroad	46,067.25	8,332.36	-----	-----	-----	-----
Nevada Northern Railway	707,243.46	719,401.59	-----	-----	625,000.00	625,000.00
Pioche Pacific Railroad	340,182.36	6,122.64	-----	-----	-----	-----
San Pedro, Los Angeles and Salt Lake Railroad	1,477.79	179,969.80	-----	-----	-----	-----
Silver Peak Railroad	26,925,262.02	41.46	-----	-----	-----	-----
Southern Pacific Company	268,347.16	40,364,922.46	-----	-----	16,860,344.32	16,860,344.32
Tonopah and Goldfield Railroad	15,140.69	220,866.26	-----	-----	-----	-----
Tonopah and Tidewater Railroad	62,436.66	34,800.17	-----	-----	-----	-----
Virginia and Truckee Railway	3,338,454.21	83,603.61	-----	-----	50,000.00	25,000.00
Western Pacific Railway	-----	4,420,607.89	-----	-----	-----	-----
Totals	\$52,901,927.77	\$59,904,183.27	\$5,708,690.00	\$5,708,690.00	\$27,434,124.32	\$28,702,094.32

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

**INCOME ACCOUNT
DISPOSITION OF NET INCOME**

Company	Additions and betterments charged to income		Miscellaneous appropriations		Balance carried forward to profit and loss	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$5,574,433.63	\$2,719,317.76	\$461,105.11	\$51,495.83	\$63,378.96	\$117,448.69
Bullfrog-Goldfield Railroad	-----	-----	-----	-----	4,417,201.84	2,660,424.37
Central Pacific Railroad	-----	-----	59,796.10	72,968.11	4,877.41	2,430.48
Eagle Salt Works Railroad	-----	-----	-----	-----	3,800.09	9,197.29
Eureka-Nevada Railway ^a	-----	-----	-----	-----	2,106,852.04	107,634.61
Goldfield Consolidated M. & T. Co.	-----	-----	-----	-----	41,714.86	47,972.02
Las Vegas and Tonopah Railroad	-----	-----	14,080.00	13,939.98	36,003.58	15,856.26
Nevada-California-Oregon Railway	-----	-----	-----	-----	4,271.10	7,248.61
Nevada Central Railroad	-----	-----	-----	-----	46,067.25	8,382.35
Nevada Copper Belt Railroad	-----	-----	-----	-----	82,243.48	94,401.59
Nevada Northern Railroad	-----	-----	-----	-----	-----	6,122.64
Pioche Pacific Railroad	-----	-----	-----	10,000.00	340,182.36	169,809.80
San Pedro, Los Angeles and Salt Lake Railroad	-----	-----	-----	-----	1,477.79	21.96
Silver Peak Railroad	-----	-----	-----	-----	-----	-----
Southern Pacific Company	-----	-----	50,000.00	5,000.00	9,859,918.30	23,999,578.13
Tonopah and Goldfield Railroad	-----	-----	90,200.00	111,680.00	178,147.15	109,306.26
Tonopah and Tidewater Railroad	-----	-----	-----	-----	\$5,140.89	54,900.17
Virginia and Truckee Railroad	-----	-----	-----	-----	12,455.66	14,603.61
Western Pacific Railway	-----	-----	-----	-----	\$3,388,454.21	4,420,607.83
Totals	\$5,574,433.63	\$2,719,317.76	\$675,181.21	\$264,973.92	\$13,554,498.61	\$22,509,077.27

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

PROFIT AND LOSS ACCOUNT

Company	Balance carried forward to profit and loss		Dividends declared out of surplus		Balance, credit or debit, on June 30	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	863,378.96	\$117,448.69			\$20,569,800.81	\$20,569,800.81
Bullfrog-Goldfield Railroad	4,417,201.84	2,660,424.37	\$7,540,680.00		435,377.64	413,373.87
Central Pacific Railroad	4,877.41	2,430.43			22,082,463.36	1,783,338.27
Eagle Salt Works Railroad	3,800.03	9,187.29			16,110.04	18,401.10
Eureka-Nevada Railway ^a					945.48	10,565.78
Goldfield Consolidated M. & T. Co.	2,106,852.04	107,634.61	2,041,232.88	614,753.78	843,351.19	336,232.07
Las Vegas and Tonopah Railroad	41,714.86	47,972.02			73,614.60	129,774.68
Nevada-California-Oregon Railroad	36,003.58	15,856.26	15,000.00		259,103.96	233,434.42
Nevada Central Railroad	4,271.10	7,248.61			25,423.60	32,677.21
Nevada Copper Belt Railroad	46,067.25	8,332.35			80,408.18	72,880.27
Nevada Northern Railroad	82,243.48	94,401.69			397,579.82	517,355.83
Pioche Pacific Railroad		6,122.64				6,122.64
San Pedro, Los Angeles and Salt Lake Railroad	340,182.96	169,809.80			3,680,709.48	666.58
Silver Peak Railroad	7,477.79	21.96			76,848,703.35	106,882,974.79
Southern Pacific Company	9,869,918.30	23,999,678.13			796,922.76	760,857.07
Tonopah and Goldfield Railroad	178,147.15	109,306.26	150,500.00	150,500.00	302,195.75	359,866.77
Tonopah and Tidewater Railroad	25,140.39	54,900.17			390,615.80	357,831.14
Virginia and Truckee Railroad	12,455.66	14,603.61	25,000.00	25,000.00	6,662,722.13	11,320,195.33
Western Pacific Railroad	3,263,434.21	4,450,607.83				
Totals	\$13,554,498.61	\$22,509,077.27	\$9,772,822.88	\$23,319,883.73	\$109,278,423.17	\$110,121,500.48

Dividends out of surplus 1913: Central Pacific Railroad, preferred 20½ per cent, common 6 per cent.

Goldfield Consolidated M. & T. Co., common ½ per cent.

Nevada-California-Oregon Railroad, preferred 2 per cent.

Tonopah and Goldfield Railroad, preferred 7 per cent, common 7 per cent.

Virginia and Truckee Railroad, common ½ per cent.

Dividends out of surplus 1914: Central Pacific Railroad, preferred 26 per cent, common 26 per cent.

Goldfield Consolidated M. & T. Co., common ½ per cent.

Tonopah and Goldfield Railroad, preferred 7 per cent, common 7 per cent.

Virginia and Truckee Railroad, common ½ per cent.

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

Italic figures denote deficit.

OPERATING REVENUES—TOTAL

Company	Freight revenue		Passenger revenue		Excess baggage revenue	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway*	\$1,318.89	\$1,105.57	\$447.74	\$410.22	\$2.08	\$4.27
Burlingame-Goldfield Railroad	71,966.01	62,654.68	18,920.12	15,261.58	149.87	117.02
Central Pacific Railway	602.32	1,499.25	13,774.55	11,694.60	70.61	65.00
Eagle Salt Works Railroad	89,317.77	38,142.10				
Eureka-Nevada Railway	57,317.77	38,142.10				
Goldfield Consolidated M. & T. Co.	157,041.22	148,983.68	35,014.37	31,390.62	620.20	484.19
Las Vegas and Tonopah Railroad	235,575.20	215,886.40	143,858.35	119,892.58	1,323.02	887.73
Nevada-California-Oregon Railway	31,558.94	27,847.14	14,453.71	12,692.10	171.86	79.70
Nevada Central Railroad	181,573.39	125,952.74	25,447.90	19,491.81	343.17	335.97
Nevada Copper Belt Railroad	1,423,072.64	1,572,294.40	173,891.67	147,309.87	1,866.45	1,786.06
Nevada Northern Railway		13,824.15				
Piedmont Pacific Railroad	6,341,500.50	6,908,013.17	3,137,233.99	3,013,609.47	47,163.12	47,145.73
San Pedro, Los Angeles and Salt Lake Railroad	7,975.31	8,311.38	3,467.19	3,098.55	19.84	27.72
Silver Peak Railroad						
Southern Pacific Company	56,399,970.16	55,132,071.43	32,024,917.46	30,013,598.24	399,845.26	386,297.97
Tonopah and Goldfield Railroad	550,831.71	546,929.09	106,655.66	100,338.13	1,802.06	1,567.02
Tonopah and Tidewater Railroad	266,292.95	291,211.37	43,198.11	40,235.47	1,318.80	1,276.51
Virginia and Truckee Railroad	202,111.81	178,734.22	81,402.53	76,451.68	1,119.70	1,072.83
Western Pacific Railway	4,635,630.55	4,676,940.10	1,354,082.72	1,253,731.12	10,385.80	10,018.57
Totals	\$70,618,688.14	\$70,082,296.85	\$37,182,292.26	\$34,863,256.74	\$465,253.88	\$450,154.34

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Parlor and chair car revenue		Mail revenue		Express revenue	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway*						
Bullfrog-Goldfield Railroad			\$515.78	\$535.68	\$349.48	\$276.91
Central Pacific Railroad			5,652.87	6,841.71	772.79	617.83
Eagle Salt Works Railroad						
Eureka-Nevada Railway			89.86	1,120.69	593.18	427.78
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad			8,346.32	8,498.61	2,934.14	2,989.38
Nevada-Central Railroad			21,071.18	20,983.94	9,081.78	4,871.53
Nevada-Copper Belt Railroad			6,613.98	6,532.58	1,336.97	1,074.67
Nevada Northern Railroad			1,969.64	1,778.33	2,813.63	1,986.36
Pioche Pacific Railroad	\$974.50	\$2,913.15	12,706.00	13,288.20	9,741.82	8,824.13
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	1,598.30	1,507.50	182,666.41	185,912.98	214,291.83	181,555.35
Southern Pacific Company			760.51	750.69	257.19	186.76
Tonopah and Goldfield Railroad	9,249.35	190.80	1,944,072.11	2,025,846.46	2,151,480.84	2,013,678.66
Tonopah and Truckee Railroad			12,212.05	12,571.89	16,436.34	17,393.33
Virginia and Truckee Railroad			13,247.76	13,691.56	2,014.96	1,660.20
Western Pacific Railroad			8,186.01	6,418.86	7,497.89	7,723.94
			22,416.26	31,402.69	88,741.86	78,276.47
Totals	\$11,792.15	\$4,611.45	\$2,207,416.72	\$2,904,001.77	\$2,508,327.79	\$2,321,086.79

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL.

Company	Milk revenue on passenger trains		Other passenger train service		Total passenger service train revenue	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway ^a					\$1,309.08	\$1,226.18
Bullfrog-Goldfield Railroad					25,496.65	21,887.64
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^b					14,528.20	13,208.07
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad			\$10.00	\$19.23	46,927.03	43,280.09
Nevada-California-Oregon Railway			88.20		175,185.51	146,069.53
Nevada-Central Railroad					22,575.51	20,379.06
Nevada-Copper Belt Railroad					31,996.34	23,531.57
Nevada Northern Railroad			167.95	528.15	189,348.39	174,641.26
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	\$32,076.48	\$22,239.39	101,277.51	60,612.02	3,686,266.64	3,482,636.49
Silver Peak Railroad					4,694.73	4,066.72
Southern Pacific Company	65,611.22	66,115.33	512,496.39	590,114.17	37,111,571.71	35,100,841.22
Tonopah and Goldfield Railroad			122.70	196.65	137,238.83	132,069.07
Tonopah and Tidewater Railroad					58,767.62	55,883.74
Virginia and Truckee Railroad					95,406.37	89,872.31
Western Pacific Railway			42.25	176.40	1,475,667.89	1,373,604.15
Totals	\$97,687.70	\$68,409.32	\$614,204.00	\$651,646.68	\$43,086,979.50	\$40,683,167.09

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Switching revenue		Special service train revenue		Miscellaneous transportation revenue	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway ^a	\$5.00	\$350.00				
Bullfrog-Goldfield Railroad	1,200.00					
Central Pacific Railway						
Eagle Salt Works Railway ^b		436.50	\$142.50	\$403.60	\$1,170.23	\$1,783.15
Eureka Nevada Railway ^b	1,948.00	1,857.50		788.00		
Goldfield Consolidated M. & T. Co.	680.00	177.50				
Las Vegas and Tonopah Railroad				60.00		
Nevada-California-Oregon Railway				2.50		
Nevada Central Railroad	10,617.50	12,407.50	423.20	218.00		16.00
Nevada Copper Belt Railroad	1,726.50	744.75				
Nevada Northern Railway						
Pioche Pacific Railroad	66,375.73	59,238.33	17,302.60	35,684.30	1,359.33	963.99
Silver Peak Railroad						
Southern Pacific Company	532,269.45	500,060.85	28,221.64	24,955.33	376,337.97	326,653.84
Tonopah and Goldfield Railroad	4,663.50	5,623.00	458.00	200.00		
Tonopah and Tidewater Railroad				67.50		
Virginia and Truckee Railway	190.00	237.50	1,239.70	319.50		
Western Pacific Railway	14,709.50	16,497.82	13,567.16	764.24	92.50	954.40
Totals	\$634,385.43	\$597,671.25	\$61,674.90	\$63,463.67	\$378,900.09	\$350,371.38

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Total revenue from transportation		Station and train privileges		Parcel-room receipts	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway ^a	\$2,627.97	\$2,331.75		\$8.84		
Bullfrog-Goldfield Railroad	96,661.66	84,772.32				
Central Pacific Railroad						
Eagle Salt Works Railway	602.32	1,499.25				
Eureka-Nevada Railway	55,153.76	53,436.92				
Goldfield Consolidated M. & T. Co.	87,347.77	89,617.75				
Las Vegas and Tonopah Railroad	195,919.25	194,009.22				
Nevada-California-Oregon Railway	401,565.71	366,153.33	\$180.00	142.50		
Nevada Central Railroad	54,132.45	48,290.19				
Nevada Copper Belt Railroad	224,187.23	164,210.31				
Nevada Northern Railroad	1,629,570.73	1,747,898.81				
Pioche Pacific Railroad		13,324.15				
San Pedro, Los Angeles and Salt Lake Railroad	10,112,804.80	10,486,636.23	8,458.17	8,309.44	\$308.25	\$439.55
Silver Peak Railroad	12,670.04	12,378.09				
Southern Pacific Company	94,448,370.93	91,134,553.27	178,621.21	177,455.14	30,379.10	27,027.60
Tonopah and Goldfield Railroad	683,222.04	683,821.16	600.00	550.00	61.50	52.60
Tonopah and Tidewater Railroad	325,040.57	337,162.71				
Virginia and Truckee Railway	298,947.88	289,213.53				
Western Pacific Railway	6,139,957.90	6,067,750.71	1,426.19	1,611.81	213.98	194.53
Totals	\$114,780,788.01	\$111,756,969.74	\$189,236.57	\$188,077.73	\$30,962.78	\$27,714.28

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Storage—Freight		Storage—Baggage		Car service	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway ^a	\$20.39	\$2.15	\$1.50	\$6.30	\$64.00	\$25.00
Bullfrog-Goldfield Railroad.....	38.60	1.45			52.00	15.00
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....						
Eureka-Nevada Railway ^b	14.33				65.50	296.00
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	73.21	90.54	2.65	3.55	142.00	135.00
Nevada-California-Oregon Railway.....	87.70	46.14	95.50	106.15	12.00	30.00
Nevada Central Railroad.....						
Nevada Copper Belt Railroad.....	79.39	53.98	4.82	1.30	1,375.00	952.00
Nevada Northern Railroad.....	53.54	111.96	151.90	197.45	4,424.00	3,779.00
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....	2,637.62	2,166.96	6,623.30	5,562.15	29,051.61	25,856.50
Silver Peak Railroad.....		1.50			85.75	128.00
Southern Pacific Company.....	26,511.17	29,998.69	62,927.10	56,952.82	117,613.50	134,000.00
Tonopah and Goldfield Railroad.....	156.68	101.63	268.06	210.25	1,374.00	3,456.00
Tonopah and Tidewater Railroad.....	9.06	.90			23.00	102.00
Virginia and Truckee Railroad.....	139.47	111.54	67.30	99.55	210.00	244.50
Western Pacific Railroad.....	625.65	1,157.03	2,377.65	2,352.10	8,392.00	4,478.00
Totals	\$30,496.81	\$33,844.27	\$72,524.77	\$66,491.62	\$162,896.36	\$173,526.00

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Telegraph and telephone service		Rents of buildings and other property		Miscellaneous	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway*	\$233.75	\$200.24	\$31.25	\$30.00	\$42.05	\$38.03
Burlington Railroad			180.00	180.00	101.43	8.58
Central Pacific Railroad						10.00
Eagle Salt Works Railroad	65.00	48.75	284.00	560.50	311.42	271.31
Eureka-Nevada Railway					2,847,639.46	904,048.22
Goldfield Consolidated M. & T. Co.	531.90	479.09	19.00	164.00	5.08	1.77
Las Vegas and Tonopah Railroad			780.00	444.50	1,219.19	837.19
Nevada-California-Oregon Railway	449.47	329.70			341.43	177.06
Nevada Central Railroad					230.06	834.17
Nevada Copper Belt Railroad						
Nevada Pacific Railroad	10,280.49	9,082.81	78.00	137.00		
Pioche Nevada Railway						
Santa Fe, Los Angeles and Salt Lake Railroad	7,731.12	8,780.39	10,855.88	15,175.40	30,792.25	48,412.19
Silver Peak Railroad			60.00	60.00		
Southern Pacific Company	77,832.08	77,535.90	172,367.66	83,867.36	182,026.30	223,138.23
Tonopah and Goldfield Railroad			564.00	462.33	151.44	223,175.86
Tonopah and Tidewater Railroad	1,668.69	1,806.78	1,002.49	1,022.88	465.76	333.44
Virginia and Truckee Railway					443.53	984.77
Western Pacific Railway			13,547.24	12,442.95	2,995.06	5,089.97
Totals	\$98,837.50	\$98,563.66	\$199,779.52	\$114,566.42	\$3,068,764.47	\$1,183,405.79

*Operating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING REVENUES—TOTAL

Company	Total revenue from operation other than transportation		Total operating revenues, entire line	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$332.94	\$330.56	\$98,090,764.41	\$93,540,298.19
Butte and Great Northern Railway	372.03	200.03	96,063.69	84,972.35
Central Pacific Railway				
Eagle Salt Works Railway	740.25	10.00	602.32	1,509.25
Eureka-Nevada Railway ^b	2,847,967.23	1,175.56	55,899.01	64,612.46
Goldfield Consolidated M. & T. Co.	793.84	904,048.22	2,934,967.23	993,666.97
Las Vegas and Tonopah Railroad	2,413.39	873.95	196,713.09	194,863.17
Nevada-California-Oregon Railway		1,106.48	403,979.10	367,259.81
Nevada Central Railroad	840.90	606.76	64,973.35	48,786.96
Nevada Copper Belt Railroad	1,693.29	1,341.45	225,876.52	166,551.76
Nevada Northern Railway	15,017.93	13,308.12	1,644,688.66	1,761,196.93
Pioche Pacific Railroad				13,324.15
San Pedro, Los Angeles and Salt Lake Railroad	96,473.20	114,702.48	10,288,049.93	10,626,571.18
Silver Peak Railroad	143.75	199.50	12,916.79	12,867.68
Southern Pacific Company	846,283.12	810,275.74	96,336,314.96	192,083,068.43
Tonopah and Goldfield Railroad	8,173.67	6,293.50	996,997.71	688,849.83
Tonopah and Tidewater	3,390.00	3,286.50	928,540.57	940,423.81
Virginia and Truckee Railroad	890.30	1,450.36	298,868.18	270,653.89
Western Pacific Railway	29,587.71	27,326.39	66,173,623.29	66,096,673.37
Totals	\$3,851,973.55	\$1,885,189.77	\$216,791,662.83	\$207,302,863.50

^aOperating revenues for Atchison, Topeka and Santa Fe Railway are shown for operations in Nevada only.

^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

^cJoint facilities, credit of \$28,771.93 included in total.

^dJoint facilities, credit of \$24,932.42 included in total.

^eJoint facilities, credit of \$66,546.92 and debit of \$16,885.99 accounted for in total.

^fJoint facilities, credit of \$93,882.27 and debit of \$652.96 accounted for in total.

^gJoint facilities, credit of \$4,082.68 included in total.

^hJoint facilities, credit of \$4,496.27 included in total.

STOCKS AND BONDS OWNED

Company	Total par value of stocks owned		Dividends accrued on stocks owned		Funded debt owned	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$120,641,899.90	\$120,616,216.40	\$100,196.00	\$70,630.54	\$98,496,930.91	\$90,565,907.11
Bullfrog-Goldfield Railroad					40,000.00	40,000.00
Central Pacific Railway	5,940,200.00	5,940,200.00			171,150.00	523,150.00
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad	271,000.00	249,000.00	330.00		401,000.00	301,000.00
Nevada Copper Belt Railroad						
Nevada Northern Railroad					500,000.00	500,000.00
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	50,223.00	50,223.00			428,000.00	428,000.00
Silver Peak Railroad						
Southern Pacific Company	665,663,132.73	666,380,232.77	21,279,768.89	38,358,178.04	146,957,902.03	148,866,502.03
Tonopah and Goldfield Railroad					350,000.00	350,000.00
Tonopah and Tidewater Railroad					350,000.00	350,000.00
Virginia and Truckee Railway						
Western Pacific Railway	500,400.00	500,400.00				
Totals	\$798,076,855.43	\$798,736,272.17	\$21,390,233.89	\$36,428,808.58	\$234,693,982.94	\$241,924,559.14

STOCKS AND BONDS OWNED

Company	Interest accrued on funded debt owned		Miscellaneous securities owned		Dividends or interest on miscellaneous securities	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka, and Santa Fe Railway		\$476,689.59				
Bullfrog-Goldfield Railroad	\$430,351.22					
Central Pacific Railroad	8,160.00	8,160.00				
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railway		25,000.00				
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	17,120.00	17,120.00				
Silver Peak Railroad						
Southern Pacific Company	7,368,283.96	7,364,123.78	\$315,000.00	\$315,000.00		
Tonopah and Goldfield Railroad						
Tonopah and Tidewater Railroad						
Virginia and Truckee Railway			1,400.00	1,400.00		
Western Pacific Railway						
Totals	\$7,823,905.18	\$7,881,083.37	\$316,400.00	\$316,400.00		

SINKING, INSURANCE AND OTHER FUNDS

Company	Sinking, Insurance, and other funds—Cash to funds		Sinking, Insurance, and other funds—Total		Sinking, Insurance, and other funds—Cash in funds	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$403,171.73		\$461,105.11	\$51,435.83	\$1,725,846.19	\$1,778,382.02
Bullfrog-Goldfield Railroad	17,425.00		17,425.00			
Central Pacific Railway						
Central Salt Works Railroad	51,000.00	\$51,000.00	58,736.10	72,868.11	176,625.27	835,669.97
Engle Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada Central Railroad	14,150.00	14,060.00	14,150.00	14,060.00	154.18	895.29
Nevada Copper Belt Railroad						
Nevada Northern Railway						
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad		10,000.00		10,000.00		3.12
Silver Peak Railroad						
Southern Pacific Company	5,000.00		5,000.00			
Tonopah and Goldfield Railroad	90,200.00	111,680.00	90,200.00	111,680.00		
Tonopah and Tidewater Railroad	17,625.34	17,563.81	17,635.34	17,563.81	140,890.19	158,454.00
Virginia and Truckee Railway						
Western Pacific Railway						
Totals	\$598,572.07	\$294,303.81	\$665,301.55	\$277,657.75	\$2,044,519.83	\$2,773,344.40

SINKING, INSURANCE AND OTHER FUNDS, OPERATING EXPENSES—MAINTENANCE OF WAY AND STRUCTURES

Company	Sinking, Insurance, and other funds—Total in funds		Superintendence		Maintenance of roadway and track	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka, and Santa Fe Railway	\$1,726,846.19	\$1,778,332.02	\$946,145.16	\$987,708.28	\$10,410,406.16	\$8,600,249.53
Builtfrog-Goldfield Railroad	5,844,099.77	5,421,439.71	1,968.32	1,968.12	20,891.01	17,567.46
Central Pacific Railroad			813.13	814.96	556.99	7,005.48
Eureka-Nevada Railway			190.00	190.00	13,756.02	9,481.00
Eagle Salt Works Railroad			2,117.26	2,124.50	18,184.19	39,890.40
Goldfield Consolidated M. & T. Co.			6,118.16	1,494.28	40,689.52	39,432.46
Las Vegas and Tonopah Railroad	154.18	886.29	6,118.16	1,494.28	75,916.50	8,100.46
Nevada-California-Oregon Railway			280.00	1,476.00	10,362.64	9,945.79
Nevada Central Railroad			1,441.54	1,811.46	10,150.74	178,490.43
Nevada Copper Belt Railroad			6,987.26	6,688.69	144,302.66	813,465.96
Nevada Northern Railway					795,601.83	813,465.96
Pioche Pacific Railroad			79,178.46	78,466.50	1,484.62	6,980,278.74
San Pedro, Los Angeles and Salt Lake Railroad		10,000.00			6,404,678.28	47,876.15
Silver Peak Railroad			674,942.91	649,530.70	38,489.15	53,099.23
Southern Pacific Company			9,200.92	7,890.88	33,937.64	41,700.21
Tonopah and Goldfield Railroad			4,578.63	3,919.75	4,200.00	506,328.18
Tonopah and Tidewater Railroad	140,880.19	158,454.00	4,200.00	4,200.00		
Virginia and Truckee Railroad			98,069.15	78,305.68		
Western Pacific Railroad						
Totals	\$7,711,990.33	\$7,369,121.02	\$1,896,083.48	\$1,774,962.49	\$18,562,846.31	\$17,764,423.12

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES

Company	Maintenance of track structures		Maintenance of buildings, docks, and wharves		Injuries to persons	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$1,638,943.83	\$1,296,961.38	\$1,878,380.85	\$1,527,034.88	\$55,813.02	\$63,123.80
Bullfrog-Goldfield Railroad	932.83	406.59	980.86	518.66		48.84
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway ^a	150.83	963.53	906.96	1,024.05		
Goldfield Consolidated M. & T. Co.	1,065.90	146.82	15.22	6.02		
Las Vegas and Tonopah Railroad	2,310.67	2,299.98	2,545.56	2,806.10		6.09
Nevada-California-Oregon Railway	2,773.47	11,696.38	3,871.31	5,846.28	2.00	49.90
Nevada Central Railroad	1,301.81	1,004.08	1,582.85	616.74		
Nevada Copper Belt Railroad	754.12	75.34	170.06	1,101.49	25.37	1.00
Nevada Northern Railway	31,436.96	8,756.24	3,715.82	22,910.86		1.00
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	76,511.27	122,511.04	102,017.90	107,301.06	625.89	5,252.08
Silver Peak Railroad						
Southern Pacific Company	1,509,768.46	1,582,256.34	1,273,640.49	1,284,217.88	40,285.01	42,349.43
Tonopah and Goldfield Railroad	1,615.65	2,457.71	3,758.47	3,521.79	736.07	372.55
Tonopah and Tidewater Railroad	5,396.13	3,126.37	2,163.93	2,500.91	6.64	611.35
Virginia and Truckee Railway	4,902.26	4,121.59	6,315.54	4,988.50	100.00	
Western Pacific Railway	241,970.67	245,598.35	65,876.56	79,974.01	5,330.27	3,548.73
Totals	\$3,519,364.05	\$3,282,443.72	\$3,344,862.38	\$3,043,869.24	\$102,934.27	\$115,364.77

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES**

Company	Other maintenance of way expenses		Maintenance of joint track—Debit		Maintenance of joint track—Credit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$274,447.08	\$223,107.73	\$173,565.37	\$178,905.63	\$139,503.26	\$187,517.29
Burlingame-Goldfield Railroad.....	682.32	610.70	589.00	913.50	1,915.61	1,344.64
Central Pacific Railroad.....	189.83	3.93	-----	-----	-----	-----
Eagle Salt Works Railroad.....	461.13	209.46	-----	-----	-----	-----
Eureka Nevada Railway.....	-----	-----	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.....	1,334.54	1,708.72	-----	-----	-----	-----
Nevada-California-Oregon Railroad.....	885.13	1,196.28	10.00	120.00	-----	-----
Nevada-Central Railroad.....	993.84	2,414.27	-----	-----	-----	-----
Nevada-Copper Belt Railroad.....	297.70	407.61	164.04	150.37	-----	-----
Nevada-Northern Railroad.....	47.00	4,107.46	-----	-----	-----	-----
Pioche Pacific Railroad.....	25,570.36	27,850.56	94,802.60	142,884.15	2,442.72	3,012.91
San Pedro, Los Angeles and Salt Lake Railroad.....	-----	-----	-----	-----	-----	-----
Silver Peak Railroad.....	317,021.00	298,658.39	53,395.00	89,989.26	121,851.91	132,409.44
Southern Pacific Company.....	1,946.97	1,965.68	8,040.80	3,046.80	939.00	913.50
Tonopah and Goldfield Railroad.....	1,741.99	2,128.08	2,283.09	1,348.08	6.32	-----
Tonopah and Tidewater Railroad.....	791.95	763.20	-----	-----	-----	-----
Virginia and Truckee Railroad.....	19,873.75	21,989.09	2,490.93	3,415.23	855.73	1,186.43
Western Pacific Railroad.....	-----	-----	-----	-----	-----	-----
Totals	\$645,276.65	\$687,299.58	\$330,640.83	\$420,596.97	\$266,518.05	\$326,673.01

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote credit.

OPERATING EXPENSES
MAINTENANCE OF WAY AND STRUCTURES, AND MAINTENANCE OF EQUIPMENT

Company	Total—Maintenance of way and structures		Superintendence		Locomotives—Repairs	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$15,239,198.31	\$12,649,571.94	\$477,472.80	\$453,132.11	\$6,890,183.82	\$6,451,976.24
Bullfrog-Goldfield Railroad	24,378.83	20,672.30	1,839.38	1,843.48	3,362.42	6,929.20
Central Pacific Railroad	759.33	3.93	77.41		95.95	9.60
Eagle Salt Works Railroad	16,031.07	9,817.50	944.84	614.97	1,678.88	1,046.31
Eureka-Nevada Railway ^a	5,237.31	3,918.84		120.00	1,587.12	4,105.28
Goldfield Consolidated M. & T. Co.	48,953.57	43,884.67	1,842.17	1,490.80	16,277.38	20,553.49
Las Vegas and Tonopah Railroad	88,904.63	104,206.58	2,141.73	2,288.37	13,868.58	12,960.97
Nevada-California-Oregon Railway	13,841.14	9,810.56		450.00	3,776.34	2,600.37
Nevada Central Railroad	12,910.57	13,292.46	1,213.22	1,089.86	6,915.77	4,105.32
Nevada Copper Belt Railroad	186,439.71	220,954.58	5,402.71	6,104.89	58,932.47	62,659.13
Nevada Northern Railroad		1,316.75		608.50		1,605.52
Pioche Pacific Railroad	1,170,965.59	1,294,669.46	65,073.41	65,996.37	996,892.15	1,018,754.16
San Pedro, Los Angeles and Salt Lake Railroad					2,654.40	2,518.68
Silver Peak Railroad	1,496.62	879.37			6,280,179.07	5,567,190.23
Southern Pacific Company	10,151,946.19	10,734,460.50	448,632.48	447,453.31	28,897.48	22,184.98
Tonopah and Goldfield Railroad	67,823.03	66,181.06	8,651.55	8,056.17	11,788.59	11,614.79
Tonopah and Tidewater Railroad	50,060.28	66,563.69	3,696.42	3,571.30	7,685.65	9,935.50
Virginia and Truckee Railroad	58,009.96	53,432.23	3,370.00	3,360.50	229,023.87	413,521.47
Western Pacific Railway	968,578.78	1,845,591.46	98,737.90	96,291.41		
Totals	\$29,076,429.92	\$26,652,236.88	\$1,067,096.02	\$1,062,372.04	\$14,525,699.94	\$13,609,261.24

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES MAINTENANCE OF EQUIPMENT

Company	Cars—Repairs		Floating equipment—Repairs		Work equipment—Repairs	
	1913	1914	1913	1914	1913	1914
Archison, Topeka and Santa Fe Railway	\$4,806,863.44	\$6,105,063.24	\$51,115.74	\$27,155.36	\$160,092.13	\$127,690.81
Bullfrog-Goldfield Railroad	3,847.25	1,874.35	-----	-----	51.72	70.06
Central Pacific Railway	-----	-----	-----	-----	-----	-----
Eagle Salt Works Railway	-----	-----	-----	-----	-----	-----
Eureka-Nevada Railway ^a	2,635.62	2,291.14	-----	-----	10.50	-----
Goldfield Consolidated M. & T. Co.	748.46	517.06	-----	-----	-----	-----
Las Vegas and Tonopah Railroad	4,849.01	4,741.79	-----	-----	-----	-----
Nevada-California-Oregon Railroad	13,014.31	13,174.29	-----	-----	1,367.29	1,787.29
Nevada Central Railroad	2,679.68	1,851.37	-----	-----	-----	-----
Nevada Copper Belt Railroad	2,132.05	2,072.18	-----	-----	-----	-----
Nevada Northern Railway	44,880.99	70,302.65	-----	-----	-----	-----
Pioche Pacific Railroad	-----	355.94	-----	-----	7.71	81.27
San Pedro, Los Angeles and Salt Lake Railroad	419,718.91	433,507.26	-----	-----	1,103.44	3,005.53
Silver Peak Railroad	32.55	160.43	-----	-----	22,163.26	26,570.46
Southern Pacific Company	4,422,678.95	4,706,387.82	-----	-----	-----	-----
Tonopah and Goldfield Railroad	20,303.53	21,871.21	\$24,161.96	\$153,442.66	\$215,618.67	\$189,961.97
Tonopah and Tidewater Railroad	4,000.24	1,959.90	-----	-----	8.82	139.01
Virginia and Truckee Railway	7,833.45	6,408.00	-----	-----	629.32	1,245.37
Western Pacific Railway	144,636.19	169,899.19	8,247.31	8,321.04	13,015.62	54,484.21
Totals	\$9,960,944.63	\$10,543,522.82	\$283,624.91	\$188,949.06	\$419,063.38	\$405,046.12

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
MAINTENANCE OF EQUIPMENT**

Company	Equipment, renewals		Equipment, depreciation		Injuries to persons	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$202,097.44	\$107,994.73	\$3,208,332.38	\$3,408,806.27	\$41,078.92	\$35,240.82
Bullfrog-Goldfield Railroad	288.10		4,907.94	4,889.59		45.84
Central Pacific Railway						
Eagle Salt Works Railroad						
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad			6,560.18	5,957.06		
Nevada-California-Oregon Railway		208.30	14,484.12	16,382.88		6,891.27
Nevada Central Railroad			1,820.00	8,886.00		960.70
Nevada Copper Belt Railroad			9,301.80	8,382.06		
Nevada Northern Railway	879.27	3,950.89	61,722.06	68,384.82	44.50	4.00
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	8,919.89	2,105.26	128,231.21	106,071.33	3,221.27	2,980.38
Silver Peak Road						
Southern Pacific Company	1,041,064.87	40,698.55	62,442.85	1,484,437.13	43,500.31	30,398.80
Tonopah and Goldfield Railroad	3,453.13	45,515.73	26,639.95	29,815.45	894.54	357.79
Tonopah and Tidewater Railroad	4,989.04	219.23	6,631.40	5,674.60	202.74	350.90
Virginia and Truckee Railroad			11,848.44	12,362.04		
Western Pacific Railway	10,474.42	555.95	62,533.09	81,995.61	1,402.85	3,480.73
Totals	\$1,272,801.16	\$201,176.64	\$3,598,535.22	\$5,229,644.69	\$89,754.83	\$80,653.23

OPERATING EXPENSES MAINTENANCE OF EQUIPMENT

Company	Other maintenance of equipment expenses		Maintenance of joint equipment at terminals— Debit		Maintenance of joint equipment at terminals— Credit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$449,569.93	\$444,907.73	\$13,217.58	\$10,742.25	\$22,073.80	\$21,369.97
Burlington Railroad	58.47	218.44				
Central Pacific Railway	1.20					
Eagle Salt Works Railroad	888.38	227.02				
Eureka-Nevada Railway	731.12	92.13				
Goldfield Consolidated M. & T. Co.	1,272.48	863.69				
Las Vegas and Tonopah Railroad	533.97	907.97				
Nevada-California-Idaho-region Railway	2,013.80	1,748.35	31.20			
Nevada Central Railroad	22,294.10	26,619.94				
Nevada Copper Belt Railroad						
Nevada Northern Railway	54,969.05	66,115.63	13,726.98	16,903.48		
Pack Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	433,632.35	411,422.94	13,163.88	10,869.47	2,024.73	717.29
Silver Peak Railroad	2,069.47	2,794.22				
Southern Pacific Company	1,625.87	2,787.70				
Tonopah and Goldfield Railroad	2,412.77	2,576.12				
Virginia and Tidewater Railroad	6,978.44	28,179.80				
Western Pacific Railway						
Totals	\$979,361.30	\$987,234.13	\$40,139.54	\$38,515.20	\$24,098.53	\$22,087.86

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote credit.

OPERATING EXPENSES
MAINTENANCE OF EQUIPMENT, TRAFFIC EXPENSES AND TRANSPORTATION EXPENSES

Company	Total maintenance of equipment expenses		Traffic expenses—Total		Superintendence and dispatching of trains	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$16,317,940.38	\$16,181,249.09	\$2,074,894.62	\$2,135,098.53	\$1,338,005.78	\$1,299,660.87
Bullfrog-Goldfield Railroad	14,896.28	16,384.38	10,763.79	10,247.86	2,241.62	2,196.04
Central Pacific Railway	186.06	9.60	161.05	78.66	42.63	1,229.92
Eagle Salt Works Railroad	6,157.72	4,179.44			1,825.00	240.00
Eureka-Nevada Railway*	2,836.58	4,742.34			4,262.08	3,925.62
Goldfield Consolidated M. & T. Co.	30,249.86	32,644.38	13,296.09	14,075.53	4,080.83	4,069.81
Las Vegas and Tonopah Railroad	46,828.51	53,546.61	9,306.29	10,628.77	150.50	510.00
Nevada-California-Oregon Railroad	9,209.89	7,255.41			3,017.05	3,355.54
Nevada Central Railroad	21,615.55	17,889.04	3,710.99	3,545.50	10,583.03	11,848.49
Nevada Copper Belt Railroad	196,269.54	296,024.75	4,563.63	5,590.66		
Nevada Northern Railroad		2,701.82				
Pioche Pacific Railroad	1,709,868.08	1,735,944.33	378,099.04	382,877.31	81,704.56	85,778.13
San Pedro, Los Angeles and Salt Lake Railroad	2,696.96	2,679.11				
Silver Peak Railroad	13,163,060.31	13,043,352.99	2,062,542.61	1,917,807.63	1,164,883.15	1,128,808.29
Southern Pacific Company	89,697.57	129,684.76	22,629.70	22,177.61	21,391.88	21,978.52
Tonopah and Goldfield Railroad	32,664.12	25,623.79	20,549.31	21,062.06	5,000.41	5,070.40
Tonopah and Tidewater Railroad	33,300.31	34,667.16	8,323.32	8,444.86	3,490.00	3,516.30
Virginia and Truckee Railroad	517,549.69	796,729.41	369,623.06	337,901.37	92,436.82	94,316.79
Western Pacific Railroad						
Totals	\$32,192,302.40	\$32,324,157.91	\$4,968,335.92	\$4,869,611.96	\$2,722,605.08	\$2,666,493.72

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Station service		Yard enginemen		Other yard employees	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$4,706,229.29	\$4,646,371.18	\$663,124.65	\$644,425.66	\$1,479,278.79	\$1,439,615.36
Bullfrog-Goldfield Railroad	9,350.12	7,606.91				
Central Pacific Railroad						
Eagle Salt Works Railway						
Eureka-Nevada Railway	3,848.52	3,467.38				
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	10,978.96	9,065.38	1,296.00	1,147.80	1,313.83	1,578.34
Nevada-California-Oregon Railroad	20,681.60	19,021.35				
Nevada Central Railroad	3,917.73	4,064.34				
Nevada Copper Belt Railroad	7,769.16	6,742.06				
Nevada Northern Railroad	31,194.06	31,844.96	5,359.15	9,661.85	9,960.55	16,225.05
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	359,046.15	338,973.73	48,081.43	47,997.59	101,665.50	2,388.12
Silver Peak Railroad	1,910.22	1,964.09				
Southern Pacific Company	4,235,450.44	4,402,540.83	551,048.22	540,204.59	1,531,498.05	1,628,680.79
Tonopah and Goldfield Railroad	32,870.72	32,233.36				
Tonopah and Tidewater Railroad	13,331.95	12,631.02				
Virginia and Truckee Railway	21,196.47	20,612.53				
Western Pacific Railroad	314,637.24	306,911.13	32,712.02	33,174.01	67,406.23	67,923.73
Totals	\$9,822,311.63	\$9,843,000.29	\$1,301,621.47	\$1,276,611.50	\$3,190,988.00	\$3,158,331.41

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Fuel for yard locomotives		All other yard expenses		Road enginemen and motormen	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$673,783.42	\$664,305.06	\$450,512.25	\$428,330.48	\$3,610,394.77	\$3,432,979.88
Bullfrog-Goldfield Railroad					5,682.76	5,600.58
Central Pacific Railroad						86.51
Eagle Salt Works Railroad					181.07	2,516.16
Eureka Nevada Railway					2,415.11	3,303.63
Goldfield Consolidated M. & T. Co.					3,466.31	3,303.63
Las Vegas and Tonopah Railroad	1,607.61	1,238.31	548.89	336.61	10,475.31	10,340.34
Nevada-California-Oregon Railway					16,423.69	14,689.73
Nevada Central Railroad					3,727.10	3,479.18
Nevada Copper Belt Railroad		3.72		66.79	8,001.80	5,907.60
Nevada Northern Railway	3,230.00	11,534.24	829.56	1,000.44	42,843.96	42,549.07
Pioche Pacific Railroad						467,712.83
San Pedro, Los Angeles and Salt Lake Railroad	75,542.53	69,865.93	50,046.30	52,004.81	405,460.29	1,985.60
Silver Peak Railroad					2,048.93	3,517,724.56
Southern Pacific Company	501,991.40	493,253.13	869,032.10	380,235.39	3,562,825.90	16,108.06
Tonopah and Goldfield Railroad					16,153.67	9,230.80
Tonopah and Tidewater Railroad					8,926.76	13,838.96
Virginia and Truckee Railway					13,838.96	13,241.81
Western Pacific Railway	30,504.00	33,339.56	9,454.39	8,725.26	302,796.34	272,766.44
Totals	\$1,296,668.96	\$1,273,537.96	\$680,453.49	\$670,699.78	\$8,013,162.70	\$7,819,212.27

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES TRANSPORTATION EXPENSES

Company	Fuel for road locomotives		Other road locomotive supplies and expenses		Road trahmen	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$5,625,765.71	\$5,625,021.70	\$2,238,866.51	\$2,019,307.42	\$3,641,249.55	\$3,468,452.37
Bullfrog-Goldfield Railroad	7,847.53	8,006.66	3,920.00	4,001.52	5,101.37	5,128.23
Central Pacific Railroad	251.50	228.00	141.57	15.42	115.20	746.73
Eagle Salt Works Railway	3,160.95	3,025.50	1,341.02	1,334.18	834.10	6,571.81
Eureka-Nevada Railway	5,964.58	5,043.79	1,100.70	1,013.59	7,469.44	13,789.06
Goldfield Consolidated M. & T. Co.	25,896.50	23,009.56	8,098.15	6,492.04	10,278.54	9,691.96
Las Vegas and Tonopah Railroad	46,359.14	36,933.40	7,409.39	8,795.77	10,611.07	984.77
Nevada-California-Oregon Railroad	4,617.18	3,596.63	1,469.49	1,030.55	1,325.01	7,407.89
Nevada Central Railroad	19,776.56	18,199.64	6,007.84	2,916.71	10,498.35	54,311.20
Nevada Copper Belt Railroad	165,230.08	179,293.83	28,966.55	28,990.45	54,124.96	1,890.26
Nevada Northern Railroad	913,799.44	987,446.63	204,838.42	227,625.67	410,831.29	467,920.06
Pioche Pacific Railroad	1,642.90	997,970.82	659.24	1,746,273.70	1,065.20	1,060.00
San Pedro, Los Angeles and Salt Lake Railroad	6,124,887.16	4,897,276.41	1,751,172.92	1,746,273.70	4,001,749.99	3,978,690.23
Silver Peak Railroad	47,566.83	43,704.06	13,259.66	11,712.08	18,310.21	18,117.96
Southern Pacific Company	19,648.31	20,434.96	11,245.19	11,907.52	11,180.00	11,529.94
Tonopah and Goldfield Railroad	29,457.16	25,463.87	9,864.23	9,892.19	14,044.97	13,357.91
Tonopah and Tidewater Railroad	678,626.91	618,118.98	159,540.09	152,691.66	296,468.69	272,425.37
Virginia and Truckee Railway						
Western Pacific Railway						
Totals	\$12,920,707.29	\$12,506,591.32	\$4,447,700.97	\$4,234,021.25	\$8,494,296.94	\$8,382,045.83

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Train supplies and expenses		Injuries to persons		Loss and damage	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$1,276,518.73	\$1,232,076.28	\$534,825.81	\$519,197.25	\$656,245.98	\$503,239.94
Bullfrog-Goldfield Railroad	1,490.63	1,696.21		86.96	70.57	69.89
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^a	229.08	237.43	96.00		18.19	22.45
Goldfield Consolidated M. & T. Co.	44.64	54.03	92.50	1.25		
Las Vegas and Tonopah Railroad	1,880.85	1,917.09		1.00	731.79	513.89
Nevada-California-Oregon Railroad	2,044.47	3,239.35	125.00	621.25	3,076.71	1,062.80
Nevada Central Railroad	63.08	202.70			160.21	84.78
Nevada Copper Belt Railroad	467.15	446.31	228.70	19.50	239.43	
Nevada Northern Railroad	5,163.16	8,193.16	1,147.00	4.00	432.73	1,171.77
Pioche Pacific Railroad		157.60				
San Pedro, Los Angeles and Salt Lake Railroad	122,062.75	130,160.72	28,230.08	60,063.37	65,963.32	68,938.42
Silver Peak Railroad	8.14	552.96				1.39
Southern Pacific Company	1,134,764.14	1,200,826.04	270,415.79	321,238.62	510,604.35	499,909.71
Tonopah and Goldfield Railroad	2,984.42	3,040.60	494.64	602.53	821.16	1,461.11
Tonopah and Truckee Railroad	3,741.73	3,798.56	10.00	139.45	178.14	460.67
Virginia and Truckee Railroad	2,606.85	2,673.23	5,014.00	98.00	227.81	210.50
Western Pacific Railroad	60,340.35	66,336.73	25,888.94	17,342.23	71,745.45	66,473.58
Totals	\$2,614,240.17	\$2,674,066.76	\$866,507.41	\$919,406.96	\$1,310,494.84	\$1,143,610.40

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Other casualties		Other transportation expenses		Operating joint yards and terminals—Debit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$207,680.66	\$186,340.69	\$397,995.01	\$302,642.96	\$277,150.23	\$238,743.32
Bullfrog-Goldfield Railroad	10.00	454.50	500.97	744.72	102.90	159.94
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^a		14.32	475.78	63.84		
Goldfield Consolidated M. & T. Co.			35.00	228.00		
Las Vegas and Tonopah Railroad	1,457.66	28.65	2,000.68	1,733.83		1,291.90
Nevada-California-Oregon Railroad	1,942.11	3,798.35	1,932.93	1,223.03	112.17	
Nevada Central Railroad	73.81	46.50	2,150.51	2,229.48		
Nevada Copper Belt Railroad	512.16	12.40	753.43	880.06	3,983.71	3,678.11
Nevada Northern Railroad	1,060.85	1,703.96	4,928.07	4,277.45		
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	29,912.69	27,218.34	76,592.93	74,963.96	273,496.83	271,022.35
Silver Peak Railroad	150.00		468.76			
Southern Pacific Company	166,917.74	145,013.04	1,737,415.01	1,706,935.92	238,276.56	271,481.84
Tonopah and Goldfield Railroad	143.28	819.03	2,717.28	3,573.45	4,154.40	
Tonopah and Tidewater Railroad	4.06	534.90	3,625.66	3,421.44		
Virginia and Truckee Railroad	173.20	43.90	1,069.29	694.70		
Western Pacific Railroad	27,068.94	15,443.49	120,342.01	128,861.88	53,966.63	56,865.09
Totals	\$436,117.08	\$380,460.06	\$2,823,895.99	\$2,831,974.71	\$351,274.43	\$398,366.96

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES**

Company	Operating joint yards and terminals—Credit		Operating joint tracks—Debit		Operating joint tracks—Credit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad						
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railroad						
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad						
Nevada Copper Belt Railroad						
Nevada Northern Railroad						
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	2,899.10	2,526.83	86,612.22	91,944.33	3,337.52	3,765.37
Silver Peak Railroad						
Southern Pacific Company	106,332.64	79,732.66	15,946.15	21,533.57	103,095.69	130,807.52
Tonopah and Goldfield Railroad	103.74	129.10	247.20	247.20		
Tonopah and Tidewater Railroad			98.33	315.63		
Virginia and Truckee Railway						
Western Pacific Railway	2,755.54	3,515.29	9,064.48	9,098.72	1,546.71	1,575.77
Totals	\$292,067.02	\$237,910.90	\$187,026.52	\$196,624.25	\$291,910.76	\$319,534.90

Italic figures denote credit.

**OPERATING EXPENSES
TRANSPORTATION EXPENSES AND GENERAL EXPENSES**

Company	Total transportation expenses				Administration		Insurance	
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$28,193,318.06	\$27,061,010.29	\$1,399,960.28	\$1,597,687.23				\$229,705.12
Bullfrog-Goldfield Railroad	36,219.73	35,407.52	5,745.30	7,723.12			\$242,067.44	1,500.66
Central Pacific Railway								
Eagle Salt Works Railway	827.06	329.93	1,776.72	970.39				
Eureka-Nevada Railway	14,240.25	12,659.15	8,221.59	10,288.47			36.00	237.50
Goldfield Consolidated M. & T. Co.	18,100.67	16,454.86	1,200.00	1,200.00				
Las Vegas and Tonopah Railroad	80,888.87	76,409.41	17,134.46	16,597.13			498.59	422.18
Nevada-California-Oregon Railroad	113,685.39	103,174.30	23,846.59	24,163.54			1,158.85	1,042.89
Nevada Central Railroad	17,654.62	16,180.98	6,333.20	4,274.55			1,945.04	
Nevada Copper Belt Railroad	61,280.34	49,135.34	7,538.76	8,990.71			2,066.64	858.98
Nevada Northern Railroad	365,041.64	402,609.93	87,891.94	39,340.44			5,174.36	12,498.59
Pioche Pacific Railroad		5,442.20		150.00				128.22
San Pedro, Los Angeles and Salt Lake Railroad	3,323,068.51	3,575,236.19	166,242.35	170,687.27			29,235.59	27,169.30
Silver Peak Railroad	7,964.28	6,932.26	1,272.90	1,272.75				
Southern Pacific Company	26,697,434.74	26,569,458.54	1,960,024.31	2,082,299.09			259,157.52	181,062.64
Tonopah and Goldfield Railroad	150,000.59	156,683.10	25,356.51	26,075.38			5,815.28	5,815.28
Tonopah and Tidewater Railroad	76,880.56	79,374.78	8,869.94	8,916.86			1,698.91	1,810.66
Virginia and Truckee Railroad	100,671.93	89,292.94	11,315.67	11,928.40			329.00	2,684.37
Western Pacific Railway	2,347,769.33	2,213,715.65	272,841.94	238,553.27			22,891.53	30,972.42
Totals	\$61,615,056.59	\$60,469,549.31	\$3,855,572.46	\$4,201,128.65			\$567,508.61	\$496,874.96

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES GENERAL EXPENSES

Company	Other general expenses		General administration of joint tracks and terminal—Debit		General administration of joint tracks and terminal—Credit	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$361,000.73	\$315,235.53	\$4,636.25	\$5,396.24	\$2,553.36	\$2,532.07
Bullfrog-Goldfield Railroad	606.77	406.19			31.87	35.46
Central Pacific Railroad	2.86					
Eagle Salt Works Railroad	519.07	196.86				
Eureka-Nevada Railway	1,888.12	1,064.54				
Goldfield Consolidated M. & T. Co.	1,077.01	1,430.10	3.00	36.00		
Las Vegas and Tonopah Railroad	1,032.31	1,433.26				
Nevada-California-Oregon Railroad	962.35	1,454.43				
Nevada-Central Railroad	1,002.72	8,688.62				
Nevada Copper Belt Railroad	3,132.44	441.35				
Nevada Northern Railroad						
Nevada Pacific Railroad	29,909.03	24,832.98	3,190.76	3,234.00	36.00	33.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad						
Southern Pacific Company	472,797.46	507,041.19	4,960.70	5,607.66	280.04	
Tonopah and Goldfield Railroad	3,170.75	1,278.54				
Tonopah and Tidewater Railroad	845.48	1,559.92				
Virginia and Truckee Railroad	855.86	797.73	32.87	35.42		
Western Pacific Railroad	19,307.69	29,353.03	53.04	75.03		
Totals	\$397,070.20	\$398,151.69	\$12,866.62	\$14,374.28	\$22,748.97	\$22,806.49

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote credit.

OPERATING EXPENSES, GENERAL EXPENSES, AND RECAPITULATION

Company	Total general expenses		Maintenance of way and structures		Maintenance of equipment	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2,005,391.34	\$2,145,776.15	\$15,239,198.31	\$12,649,571.94	\$16,317,940.38	\$16,181,249.09
Bullfrog-Goldfield Railroad	7,098.20	9,594.57	24,378.83	20,672.30	14,335.23	15,384.38
Central Pacific Railroad	1,779.30	970.39	759.33	3.98	185.05	9.60
Eagle Salt Works Railroad	8,776.66	10,722.53	16,081.07	9,317.50	6,157.72	4,179.44
Eureka-Nevada Railway ^a	3,068.12	2,964.54	5,297.31	3,918.54	2,335.58	4,742.34
Goldfield Consolidated M. & T. Co.	18,113.06	17,505.41	48,963.57	48,894.67	30,249.86	32,644.38
Las Vegas and Tonopah Railroad	26,007.53	26,639.49	88,904.63	104,205.58	45,823.51	53,546.61
Nevada-California-Oregon Railway	6,713.40	5,477.85	13,841.14	9,310.55	9,209.89	7,255.41
Nevada Central Railroad	10,608.12	11,346.12	12,910.57	13,292.45	21,615.55	17,939.04
Nevada Copper Belt Railroad	46,199.23	60,527.64	186,439.71	220,354.53	185,259.54	236,024.75
Nevada Northern Railway		719.57		1,316.75		2,701.32
Pioche Pacific Railroad	228,541.73	225,920.55	1,170,865.59	1,294,569.46	1,709,936.08	1,735,944.33
San Pedro, Los Angeles and Salt Lake Railroad	1,272.90	1,272.75	1,496.62	879.37	2,696.95	2,679.11
Silver Peak Railroad	2,595,619.95	2,726,090.51	10,151,846.19	10,734,460.50	15,163,050.31	13,043,382.99
Southern Pacific Company	30,934.10	36,167.20	67,823.08	66,181.06	89,697.57	129,684.76
Tonopah and Goldfield Railroad	11,537.20	12,322.86	50,050.28	66,153.69	32,664.12	25,423.79
Tonopah and Tidewater Railroad	12,500.53	15,410.50	58,009.96	58,432.23	33,900.31	34,667.16
Virginia and Truckee Railway	315,094.20	298,953.75	938,578.78	1,348,591.46	517,849.69	796,729.41
Western Pacific Railway						
Totals	\$5,330,275.62	\$5,608,222.96	\$28,075,429.92	\$28,652,236.88	\$32,192,302.40	\$32,324,187.91

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Traffic expenses		Transportation expenses		General expenses	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2,074,834.62	\$2,135,083.53	\$28,193,318.08	\$27,061,010.29	\$2,005,391.34	\$2,145,776.15
Bullfrog-Goldfield Railroad	10,753.79	10,247.28	38,219.73	35,407.52	7,098.20	9,594.57
Central Pacific Railroad						
Eureka-Nevada Railway ^a	161.06	78.66	827.06	329.83	1,779.30	970.39
Goldfield Consolidated M. & T. Co.			14,240.25	12,689.15	8,776.66	10,724.83
Las Vegas and Tonopah Railroad	13,296.09	14,075.53	18,100.67	16,454.85	3,088.12	2,864.84
Nevada-California-Oregon Railroad	9,206.29	10,628.77	80,898.87	76,409.41	18,113.06	17,505.41
Nevada Central Railroad			113,686.39	103,174.30	28,007.58	28,639.49
Nevada Copper Belt Railroad	3,710.99	3,545.50	17,654.62	16,180.93	6,713.40	6,477.85
Nevada Northern Railroad	4,593.83	5,590.66	61,260.34	49,135.34	10,608.12	11,346.12
Pioche Pacific Railroad			365,041.64	402,609.83	46,199.23	60,527.64
San Pedro, Los Angeles and Salt Lake Railroad	378,099.04	382,877.31	3,323,068.51	3,575,298.19	228,541.73	225,920.55
Silver Peak Railroad	106.42	91.22	7,964.28	6,832.26	1,272.90	1,272.75
Southern Pacific Company	2,062,542.61	1,917,807.63	26,697,434.74	26,569,458.54	2,596,619.95	2,726,097.61
Tonopah and Goldfield Railroad	22,629.70	22,177.61	160,000.59	156,663.10	30,984.10	36,187.20
Tonopah and Tidewater Railroad	20,549.31	21,052.06	76,890.56	79,374.78	11,537.20	12,322.86
Virginia and Truckee Railroad	8,329.32	8,444.86	100,671.93	89,292.94	12,500.53	15,410.60
Western Pacific Railroad	359,523.06	337,901.37	2,347,789.33	2,213,715.65	815,094.20	298,953.75
Totals	\$4,968,335.92	\$4,869,611.96	\$61,615,056.59	\$60,469,549.31	\$5,330,275.62	\$5,608,222.98

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Total operating expenses		Ratio of operating expenses to earnings—Per cent		Maintenance of way and structures—Per cent of total expenses	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$63,880,682.73	\$60,172,701.00	65.07	64.33	23.87	21.02
Bullfrog-Goldfield Railroad	92,786.83	91,306.03	93.69	107.45	26.27	22.64
Central Pacific Railroad						
Eagle Salt Works Railway	3,550.75	1,313.85	589.51	87.05	21.38	.30
Eureka-Nevada Railway*	45,416.75	37,457.53	81.25	68.59	35.41	26.21
Goldfield Consolidated M. & T. Co.	28,821.68	27,980.87	33.00	31.20	18.38	14.00
Las Vegas and Tonopah Railroad	191,506.45	189,529.40	97.35	97.25	25.57	25.80
Nevada-California-Oregon Railroad	283,632.40	298,194.75	70.21	81.19	31.35	34.95
Nevada Central Railroad	47,419.05	38,724.75	86.00	79.00	29.19	25.33
Nevada Copper Belt Railroad	110,105.57	95,258.46	48.75	57.53	11.72	13.95
Nevada Northern Railroad	797,533.75	925,707.55	48.49	52.56	23.38	22.87
Pioche Pacific Railroad		10,179.84		76.40		12.93
San Pedro, Los Angeles and Salt Lake Railroad	6,810,510.95	7,214,709.84	66.52	67.90	17.19	17.94
Silver Peak Railroad	13,517.17	11,854.71	105.47	94.33	7.42	7.42
Southern Pacific Company	54,871,493.80	54,991,140.17	57.35	59.75	18.57	19.62
Tonopah and Goldfield Railroad		410,873.73		53.29		16.11
Tonopah and Tidewater Railroad	191,691.47	204,737.17	58.40	60.14	26.11	32.51
Virginia and Truckee Railway	212,812.05	206,247.69	70.98	76.21	27.28	28.33
Western Pacific Railway	4,478,835.05	4,995,891.64	72.55	81.91	20.95	26.99
Totals	\$132,181,400.45	\$129,925,909.04				

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Maintenance of equip- ment—Percentage of total expenses		Traffic expenses— Percentage of total expenses		Transportation expenses—Percentage of total expenses		General expenses— Percentage of total expenses	
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	25.56	26.89	3.25	3.55	44.17	44.97	3.15	3.57
Bullfrog-Goldfield Railroad	15.45	16.85	11.59	11.22	39.04	38.78	7.65	10.51
Central Pacific Railway								
Eagle Salt Works Railroad	5.21	.73	.35	.21	23.29	26.11	50.12	73.86
Eureka-Nevada Railway*	13.56	11.16			31.35	33.80	19.33	24.62
Goldfield Consolidated M. & T. Co.	8.10	16.95			63.80	58.81	10.72	10.24
Las Vegas and Tonopah Railroad	15.80	17.22	6.94	7.43	42.23	40.32	9.46	9.33
Nevada-California-Oregon Railway	16.16	17.96	3.25	3.56	40.06	34.60	9.16	8.93
Nevada Central Railroad	19.42	18.74			37.23	41.78	14.16	14.15
Nevada Copper Belt Railroad	19.63	18.83	3.37	3.72	55.55	51.58	9.63	11.92
Nevada Northern Railroad	24.48	25.50	.53	.60	45.77	43.49	5.79	6.54
Pioche Pacific Railroad	26.54	26.54						
San Pedro, Los Angeles and Salt Lake Railroad								
Silver Peak Railroad	25.11	24.06	5.55	5.31	48.79	49.56	3.36	3.13
Southern Pacific Company	19.98	22.60	.79	.77	58.92	58.48	9.41	10.73
Tonopah and Goldfield Railroad	24.08	23.72	3.77	3.49	48.33	48.32	4.75	4.95
Tonopah and Tidewater Railroad	24.17	31.56	6.10	5.40	43.12	38.13	8.33	8.80
Virginia and Truckee Railroad	17.04	12.42	10.72	10.28	40.11	38.77	6.02	6.02
Western Pacific Railway	15.65	16.81	3.91	4.09	47.31	43.39	5.87	7.44
Western Pacific Railway	11.54	15.95	8.08	6.76	52.42	44.31	7.03	5.99

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total property investment		Total securities		Total other investments	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$617,251,407.47	\$620,928,116.41		\$8,886,907.72	\$23,469,629.42	\$23,174,042.86
Bullfrog-Goldfield Railroad	3,768,678.81	3,768,234.70				
Central Pacific Railway	289,962,917.00	272,060,014.19	\$683,681.36	486,680.36	164,686.58	102,861.91
Eagle Salt Works Railway	30,334.19	30,264.04	200,000.00	200,000.00		
Eureka-Nevada Railway ^a	11,712.18	12,082.86				
Goldfield Consolidated M. & T. Co.	10,352.30	6,827.00			471,027.44	408,876.56
Las Vegas and Tonopah Railroad	3,060,663.78	3,069,061.76				
Nevada-California-Oregon Railway	3,920,869.29	3,934,722.12				
Nevada Central Railroad	1,494,462.00	1,496,712.66				
Nevada Copper Belt Railroad	1,064,667.27	1,060,829.08				
Nevada Northern Railway	2,641,336.86	2,694,546.18	500,000.00			14,546.56
Pioche Pacific Railroad		75,250,960.73				
San Pedro, Los Angeles and Salt Lake Railroad	74,677,724.26	75,711,059.10			583,555.94	623,949.68
Silver Peak Railroad	31,209,163.71	32,239,168.71				
Southern Pacific Company	31,641,971.66	32,651,044.61	209,862,246.31	209,782,692.82	255,477,421.97	267,185,117.67
Tonopah and Goldfield Railroad	3,667,084.82	3,660,943.41			11,621.44	10,879.02
Tonopah and Tidewater Railroad	4,137,586.06	4,172,683.86	350,000.00	350,000.00		2,067.28
Virginia and Truckee Railway	1,119,329.69	1,468,628.19				
Western Pacific Railway	165,686,826.09	166,132,816.69	99,900.00	275,339.78	175,439.78	
Totals	\$1,177,536,422.55	\$1,186,473,201.68	\$211,685,726.67	\$219,960,520.68	\$280,298,382.57	\$291,716,961.50

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total working assets			Accrued income not due			Total deferred debit items		
	1913	1914	1915	1913	1914	1915	1913	1914	1915
Atchison, Topeka and Santa Fe Railway	\$52,300,875.71	\$41,240,346.89			\$231,124.42		\$6,294,140.41		\$6,294,140.41
Bullfrog-Goldfield Railroad	60,182.85	54,213.18					310.17		310.17
Central Pacific Railway	30,007,114.39	12,113,897.88		\$287.94			7,198,660.77		6,170,697.36
Eagle Salt Works Railroad	4,632.36	3,630.87							2,878.19
Eureka-Nevada Railway ^a	9,905.74	9,484.06							2,614.03
Goldfield Consolidated M. & T. Co.	797,764.80	380,918.24					2,270.83		2,270.83
Las Vegas and Tonopah Railroad	40,333.35	48,144.02					2,801.82		2,801.82
Nevada-California-Oregon Railroad	590,437.86	481,729.10			\$1.50		640.96		640.96
Nevada Central Railroad	32,946.51	36,478.42					666,138.10		666,138.10
Nevada Copper Belt Railroad	39,476.09	21,683.12							
Nevada Northern Railroad	983,418.46	1,145,291.20							
Pioche Pacific Railroad		7,927.77							
San Pedro, Los Angeles and Salt Lake Railroad	3,155,816.56	2,290,706.84		1,495.66	1,453.06		1,719,009.68		1,719,009.68
Silver Peak Railroad									
Southern Pacific Company	130,251,673.81	143,669,903.54		2,118,744.08	2,371,760.80		30,981,871.96		30,981,871.96
Tonopah and Goldfield Railroad	785,422.04	829,970.59					61,833.34		61,833.34
Tonopah and Tidewater Railroad	244,966.85	241,120.04					410,140.61		410,140.61
Virginia and Truckee Railroad	190,184.51	235,243.67					80.00		80.00
Western Pacific Railway	1,420,401.41	1,099,900.48					7,084,781.66		6,980,814.64
Totals	\$220,416,563.30	\$204,810,469.71		\$2,121,038.68	\$2,778,490.98		\$49,108,117.64		\$49,108,001.60

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Profit and loss—Balance		Grand total	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....			\$699,316,818.41	\$700,149,944.96
Burlingame-Goldfield Railroad.....			4,286,064.77	4,228,160.96
Central Pacific Railroad.....			307,980,865.10	291,046,463.36
Eagle Salt Works Railroad.....			281,076.69	282,386.81
Eureka-Nevada Railway.....			22,663.40	84,960.27
Goldfield Consolidated M. & T. Co.			1,279,144.54	790,121.80
Las Vegas and Tonopah Railroad.....			3,198,237.66	3,250,886.36
Nevada-California-Oregon Railway.....			4,516,134.97	4,433,798.16
Nevada Central Railroad.....			1,623,065.47	1,836,923.49
Nevada Copper Belt Railroad.....			3,869,581.54	3,740,840.52
Nevada Northern Railroad.....			3,624,765.51	3,769,680.36
Pioche Pacific Railroad.....				3,369,888.50
San Pedro, Los Angeles and Salt Lake Railroad.....			83,849,773.15	84,513,266.42
Silver Peak Railroad.....			299,935.29	299,877.32
Southern Pacific Company.....			654,603,693.75	638,643,807.77
Tonopah and Goldfield Railroad.....			5,511,953.74	4,452,809.93
Tonopah and Tidewater Railroad.....			5,404,653.26	5,556,549.43
Virginia and Truckee Railway.....			5,000,000.00	5,000,000.00
Western Pacific Railway.....			171,470,021.07	176,994,567.32
Totals.....	\$11,643,825.68	\$16,394,615.99	\$1,962,894,076.99	\$1,972,927,791.18

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Total stock		Total mortgage, bonded and secured debt		Working liabilities	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$305,090,530.00	\$310,055,530.00	\$322,439,045.00	\$316,469,045.00	\$13,321,706.68	\$10,994,423.80
Burlingame and Santa Fe Railway	2,000,000.00	2,000,000.00	1,839,000.00	1,839,000.00	434,729.06	337,045.96
Central Pacific Railway	84,675,500.00	84,675,500.00	200,018,397.79	200,214,397.79	907,912.42	967,633.29
Eastern Salt Works Railway	200,000.00	200,000.00			51,076.59	53,385.81
Eureka-Nevada Railway	2,500.00	2,500.00			17,743.40	39,875.69
Goldfield Consolidated M. & T. Co.	400,000.00	400,000.00			33,393.15	47,934.19
Las Vegas and Tonopah Railroad	1,500,000.00	1,500,000.00			1,671,302.85	1,727,763.86
Nevada-California-Oregon Railway	2,200,000.00	2,200,000.00	1,401,000.00	1,387,000.00	153,075.42	96,687.13
Nevada Central Railroad	750,000.00	750,000.00	750,000.00	750,000.00	1,922.61	1,183.50
Nevada Copper Belt Railroad	1,000,000.00	1,000,000.00	822,000.00	628,420.00	237,854.17	194,817.73
Nevada Northern Railroad	2,000,000.00	2,000,000.00	1,000,000.00	1,000,000.00	190,869.12	192,280.53
Pioche Pacific Railroad	250,000.00	250,000.00				5,683.27
San Pedro, Los Angeles and Salt Lake Railroad	25,000,000.00	25,000,000.00	55,155,000.00	56,274,000.00	3,438,857.39	2,919,922.62
Silver Peak Railroad	200,000.00	200,000.00				
Southern Pacific Company	272,825,195.64	272,825,195.64	165,581,910.00	203,226,336.58	115,439,608.20	84,492,981.35
Tonopah and Goldfield Railroad	2,150,000.00	2,150,000.00	950,000.00	841,000.00	77,238.44	67,974.44
Tonopah and Tidewater Railroad	1,000,000.00	1,000,000.00	3,285,344.10	3,285,344.10	1,130,687.47	1,232,914.46
Virginia and Truckee Railroad	5,000,000.00	5,000,000.00				
Western Pacific Railroad	75,000,000.00	75,000,000.00	75,081,250.00	75,017,800.00	19,580,880.22	23,312,976.28
Totals	\$780,983,725.64	\$786,208,725.64	\$828,122,946.89	\$860,932,343.47	\$156,680,757.19	\$136,656,493.69

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Accrued liabilities not due		Deferred credit items		Appropriated surplus	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$8,547,646.04	\$8,608,164.79	\$466,164.72	\$1,846,829.71	\$28,882,986.16	\$31,676,480.86
Bullfrog-Goldfield Railroad			326.71	106.10		
Central Pacific Railroad	202,786.99	2,778,761.17	43,794.64	89,070.89		4,104,448.48
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^a			2,320.00	2,684.68		
Goldfield Consolidated M. & T. Co.	2,500.20	6,966.64				
Las Vegas and Tonopah Railroad	8,491.86	9,498.28	18,442.86	18,336.28		
Nevada-California-Oregon Railway	10,476.72	10,646.76	9,908.11	8,621.12	481,576.76	496,516.74
Nevada Central Railroad		969.76	704.28	696.53		
Nevada Copper Belt Railroad	9,697.87	17,102.79				
Nevada Northern Railroad	36,306.87	50,000.00				
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	92,667.66	148,390.26	166,268.21	176,963.64		10,000.00
Silver Peak Railroad						
Southern Pacific Company	9,510,319.01	6,671,466.38	13,681,760.19	11,547,419.24	1,608,142.40	1,016,444.86
Tonopah and Goldfield Railroad	18,794.99	18,666.82	2,877.06	2,860.10	516,688.50	621,462.50
Tonopah and Tidewater Railroad	38,283.72	57,426.78	804.00	868.69		
Virginia and Truckee Railroad						
Western Pacific Railway	1,766,310.11	2,667,660.10	62,680.74	76,200.94		
Totals	\$20,283,278.98	\$20,919,604.34	\$14,441,926.38	\$13,764,224.20	\$31,499,283.82	\$37,923,323.43

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Profit and loss—Balance		Grand total	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$20,569,800.81	\$20,569,800.81	\$699,316,818.41	\$700,149,944.96
Bullfrog-Goldfield Railway.....	22,062,463.36	1,783,339.57	4,286,054.77	4,226,180.96
Central Pacific Railway.....	848,351.19	336,232.07	307,880,855.10	291,046,483.35
Eagle Salt Works Railway.....	259,103.96	253,434.42	251,076.69	252,385.81
Eureka-Nevada Railway ^a	25,428.60	32,677.21	22,583.40	34,960.27
Goldfield Consolidated M. & T. Co.	397,579.82	617,355.83	1,279,144.64	790,121.80
Las Vegas and Tonopah Railroad.....	19,855.29	59,877.25	3,198,237.66	3,250,585.38
Nevada-California-Oregon Railway.....	75,948,703.35	105,862,974.79	4,615,134.97	4,433,906.16
Nevada-Central Railroad.....	796,922.76	750,857.07	1,628,055.47	1,635,625.99
Nevada Copper Belt Railroad.....			1,869,551.64	1,840,340.62
Nevada Northern Railroad.....			3,624,765.31	3,739,636.36
Pioche Pacific Railroad.....			88,842,773.15	258,888.50
San Pedro, Los Angeles and Salt Lake Railroad.....			209,855.29	84,513,266.42
Silver Peak Railroad.....			654,603,628.79	209,877.25
Southern Pacific Company.....			4,610,921.74	685,641,807.77
Tonopah and Goldfield Railroad.....			5,454,629.29	4,452,809.98
Tonopah and Tidewater Railroad.....			5,000,000.00	5,586,542.43
Virginia and Truckee Railway.....			171,470,021.07	5,000,000.00
Western Pacific Railway.....				175,994,567.32
Totals.....	\$120,962,209.14	\$126,533,076.41	\$1,962,894,076.99	\$1,972,927,791.18

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.^bBalance sheet figures of this company incomplete. Figures shown do not represent balance profit and loss, but are simply miscellaneous debits.*Italic figures denote deficit.*

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	General officers			Other officers			General office clerks			Station agents			Other station men			Enginemen		
	1913	1914		1913	1914		1913	1914		1913	1914		1913	1914		1913	1914	
Atchison, Topeka and Santa Fe Railway	\$20.82	\$21.58		\$8.14	\$8.00		\$2.61	\$2.65		\$2.37	\$2.37		\$2.01	\$2.02		\$6.26	\$6.30	
Burlingame-Goldfield Railroad	11.62	16.27		7.16	7.13		3.54	3.58		4.23	4.27					9.12	9.21	
Central Pacific Railway																		
Central Salt Works Railroad																		
Eureka-Nevada Railway																		
Goldfield Consolidated M. & T. Co.	7.08	5.94		4.61						2.68	2.80		1.60			2.25	2.01	
Los Vegas and Tonopah Railroad	7.82	7.82		6.71	86											5.50	5.00	
Nevada-California-Oregon Railway	7.48	9.78		6.46	6.19		3.13	3.26		3.64	3.72		4.07	4.67		5.29	5.23	
Nevada Central Railroad	8.58	9.78		5.75	5.86		2.96	3.19		2.85	2.94		1.98	2.02		5.77	4.23	
Nevada Copper Belt Railroad	9.96	9.96					4.94	4.90		3.62	3.62					4.80	4.90	
Nevada Northern Railway	5.75	5.99		4.75	4.78		2.56	2.53		2.94	2.74		2.37	2.47		4.78	4.63	
Pioche Pacific Railroad	9.66	9.23		4.88	8.39		3.42	3.26		3.39	2.97		2.84	2.13		5.21	5.46	
San Pedro, Los Angeles and Salt Lake Railroad	13.45	14.52		7.54	7.59		2.85	2.87		2.77	2.79		2.14	2.17		5.01	5.04	
Silver Peak Railroad	1.64	1.64								2.83	2.88					5.69	5.57	
Southern Pacific Company	22.69	25.13		8.23	9.53		2.73	2.83										
Tonopah and Goldfield Railroad	13.66	11.83		6.16	5.98		5.77	5.69		4.94	4.87		4.16	3.95		6.43	6.33	
Tonopah and Tidewater Railroad	11.62	16.27		7.14	7.16		3.55	3.59		3.42	3.33					6.49	6.42	
Virginia and Truckee Railway	10.96	10.96		4.11	4.11		3.89	4.35		2.96	2.96		2.09	1.97		5.00	4.98	
Western Pacific Railway	26.90	23.15		8.07	8.04		3.23	3.31		2.74	2.73		2.44	2.52		6.02	6.08	

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Firemen		Conductors		Other trainmen		Machinists		Carpenters		Other shopmen	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$3.83	\$3.82	\$5.94	\$5.70	\$3.50	\$3.50	\$4.09	\$4.18	\$3.01	\$3.06	\$2.54	\$2.57
Bullfrog-Goldfield Railroad	6.84	6.89	5.89	5.95	3.71	3.75					4.95	
Central Pacific Railway												
Eagle Salt Works Railway												
Eureka-Nevada Railway	3.01	2.98	3.60	3.56	2.42	2.24	3.18	3.54	3.70		3.21	3.38
Goldfield Consolidated M. & T. Co.	4.00	4.00	6.50	5.97	4.00	4.00		4.50			4.50	
Las Vegas and Tonopah Railroad	3.28	3.24	4.99	4.93	3.65	3.67			3.30	3.11	3.20	3.12
Nevada-California-Oregon Railway	3.35	2.52	3.68	4.04	2.83	2.69	3.89	3.34	3.28	3.21	3.11	2.91
Nevada-Central Railroad	2.99	3.19	4.26	4.25	4.00	4.04	4.46	4.55	4.98	4.92	3.18	2.85
Nevada Copper Belt Railroad	3.45	3.27	4.42	4.25	3.80	3.60	4.31	4.41	4.00	5.62	3.19	3.38
Nevada Northern Railway	3.73	3.95	4.94	5.13	3.92	3.84	4.50	4.50	4.50	4.56	2.92	2.85
Pioche Pacific Railroad												
San Pedro, Los Angeles and Salt Lake Railroad	3.17	3.16	4.79	4.80	3.39	3.37	3.36	3.38	2.55	2.52	2.40	2.42
Silver Peak Railroad	4.89	4.76	3.28	3.25								
Southern Pacific Company												
Tonopah and Goldfield Railroad	4.24	4.20	5.53	5.48	3.75	3.77	4.97	5.28	4.82	5.08	4.17	4.21
Tonopah and Tidewater Railroad	4.29	4.23	6.01	6.02	3.78	3.84	3.86	3.86	4.00	4.00	3.82	3.87
Virginia and Truckee Railway	3.49	3.50	3.99	3.99	3.90	3.31	4.30	4.57	3.95	4.12	3.41	3.36
Western Pacific Railway	3.84	3.88	5.19	5.20	3.56	3.55	4.28	4.38	3.43	3.44	2.53	2.62

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Section foremen		Other trackmen		Switch tenders, watchmen, etc.		Telegraph operators and dispatchers		Employees' ac- count, floating equipment		All others	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2.13	\$2.17	\$1.49	\$1.48	\$1.51	\$1.51	\$3.11	\$3.16	\$3.11	\$3.18	\$2.27	\$2.31
Bullfrog-Goldfield Railroad	3.02	3.03	2.00	2.13	2.50	3.23	4.44	4.44			3.75	4.32
Central Pacific Railway												
Eagle Salt Works Railway	2.59	2.23	2.16	2.14	2.12	2.06					2.45	2.33
Eureka-Nevada Railway	4.00	4.00	3.50	3.69								
Goldfield Consolidated M. & T. Co.	2.55	2.58	1.65	1.69	2.50						2.38	2.94
Las Vegas and Tonopah Railroad	2.19	2.20	1.73	1.76				2.50			2.56	2.56
Nevada-California-Oregon Railway	2.75	2.75	2.00	2.00	3.00	3.00	3.29	3.28			1.77	1.72
Nevada Central Railroad	2.28	2.40	1.86	2.01			4.09	4.09			3.04	3.04
Nevada Copper Belt Railroad	2.45	2.55	1.83	1.92			4.06	4.43			3.06	3.55
Nevada Northern Railway												
Pioche Pacific Railroad	2.33	2.35	1.29	1.27	1.92	2.02	3.16	3.18			2.40	2.31
San Pedro, Los Angeles and Salt Lake Railroad											4.72	
Silver Peak Railroad												
Southern Pacific Company	3.00	3.06	1.63	1.70			3.50	3.44				
Tonopah and Goldfield Railroad	3.38	3.40	2.06	2.14	3.45	3.46	4.26	4.27			3.23	3.43
Tonopah and Tidewater Railroad	3.00	3.00	1.75	1.75	2.32	2.33	4.67	4.21			3.46	2.89
Virginia and Truckee Railway	2.55	2.85	2.19	2.22	2.61	2.61	4.85	4.97			3.20	2.58
Western Pacific Railway	2.17	2.20	1.59	1.78	1.66	1.90	4.30	4.09	3.07	3.20	2.50	2.51

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Traffic expenses		Transportation expenses		General expenses	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2,074,834.62	\$2,135,093.53	\$28,193,318.08	\$27,061,010.29	\$2,005,391.34	\$2,145,776.15
Burling-Goldfield Railroad	10,763.79	10,247.26	88,219.73	35,407.52	7,088.20	9,594.57
Central Pacific Railroad						
Eagle Salt Works Railway	161.05	78.66	827.06	329.83	1,779.30	970.39
Eureka-Nevada Railway ^a			14,240.25	12,659.15	8,776.66	10,722.83
Goldfield Consolidated M. & T. Co.			18,100.67	16,454.85	3,088.12	2,864.84
Las Vegas and Tonopah Railroad	13,296.09	14,075.53	80,888.87	76,409.41	18,113.06	17,505.41
Nevada-California-Oregon Railway	9,206.29	10,628.77	113,685.39	108,174.30	26,007.58	26,639.49
Nevada Central Railroad			17,654.62	16,180.83	6,713.40	5,477.85
Nevada Copper Belt Railroad	3,710.99	3,545.50	61,260.34	49,135.34	10,608.12	11,346.12
Nevada Northern Railway	4,593.63	5,590.66	365,041.64	402,609.88	46,199.23	60,527.64
Pioche Pacific Railroad				5,442.20		719.57
San Pedro, Los Angeles and Salt Lake Railroad	378,099.04	382,877.31	3,323,068.51	3,575,298.19	223,541.73	225,920.55
Silver Peak Railroad	106.42	91.22	7,964.28	6,932.26	1,272.90	1,272.75
Southern Pacific Company	2,062,542.61	1,917,807.63	26,697,434.74	26,569,458.54	2,596,619.95	2,728,090.51
Tonopah and Goldfield Railroad	23,623.70	22,177.61	180,000.59	156,663.10	30,984.10	36,167.20
Tonopah and Tidewater Railroad	20,549.31	21,052.05	76,890.56	79,374.78	11,537.20	12,322.86
Virginia and Truckee Railroad	8,329.32	8,444.86	100,671.93	89,292.94	12,500.53	15,410.50
Western Pacific Railroad	369,523.06	337,901.37	2,347,789.33	2,213,715.65	315,084.20	298,953.75
Totals	\$4,968,335.92	\$4,869,611.96	\$61,615,056.59	\$60,469,549.31	\$5,330,275.62	\$5,608,222.98

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Total operating expenses		Ratio of operating expenses to earnings—Per cent		Maintenance of way and structures—Per cent of total expenses	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$63,880,682.73	\$80,172,701.00	65.07	64.33	23.87	21.02
Bullfrog-Goldfield Railroad	92,785.88	91,806.03	98.69	107.45	26.27	22.64
Central Pacific Railroad						
Eagle Salt Works Railroad	3,550.75	1,313.85	689.61	87.05	21.38	.30
Eureka-Nevada Railway ^a	45,416.75	37,457.58	81.27	68.59	35.41	26.21
Goldfield Consolidated M. & T. Co.	28,821.68	27,980.87	33.00	31.20	18.38	14.00
Las Vegas and Tonopah Railroad	191,506.45	189,529.40	97.85	97.25	25.57	25.80
Nevada-California-Oregon Railroad	283,632.40	298,194.75	70.21	81.19	31.35	34.95
Nevada-Central Railroad	47,419.05	38,724.75	86.00	79.00	29.19	25.33
Nevada Copper Belt Railroad	110,105.57	95,258.46	48.75	57.53	11.72	13.95
Nevada Northern Railroad	797,533.75	925,707.55	48.49	52.56	23.38	23.87
Pioche Pacific Railroad		10,179.84		76.40		12.93
San Pedro, Los Angeles and Salt Lake Railroad	6,810,510.95	7,214,709.84	66.52	67.90	17.19	17.94
Silver Peak Railroad	13,517.17	11,854.71	105.47	94.33	11.00	7.42
Southern Pacific Company	54,671,493.80	54,991,140.17	57.35	59.75	18.57	19.52
Tonopah and Goldfield Railroad	371,064.99	410,873.73	53.29	59.65	18.28	16.11
Tonopah and Tidewater Railroad	191,691.47	204,737.17	58.40	60.14	23.11	32.51
Virginia and Truckee Railroad	212,812.05	206,247.69	70.98	76.27	27.28	23.33
Western Pacific Railroad	4,478,835.08	4,995,891.64	72.55	81.91	20.95	26.99
Totals	\$132,181,400.45	\$129,923,809.04				

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

OPERATING EXPENSES—RECAPITULATION

Company	Maintenance of equip- ment—Percentage of total expenses		Traffic expenses— Percentage of total expenses		Transportation expenses—Percentage of total expenses		General expenses— Percentage of total expenses	
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	25.56	26.89	3.25	3.55	44.17	44.97	3.15	3.57
Bullfrog-Goldfield Railroad	15.46	16.85	11.59	11.22	39.04	38.78	7.65	10.51
Central Pacific Railway								
Eagle Salt Works Railway								
Eureka-Nevada Railway	6.21	7.3			23.29	25.11	50.12	73.96
Goldfield Consolidated M. & T. Co.	13.56	11.16	.35	.21	31.35	33.80	19.33	28.62
Las Vegas and Tonopah Railroad	8.10	16.95			62.80	58.81	10.72	10.24
Nevada-California-Oregon Railway	15.80	17.23	6.94	7.43	42.23	40.32	9.46	9.23
Nevada-Central Railroad	16.16	17.96	3.25	3.56	40.08	34.80	9.16	8.98
Nevada Copper Belt Railroad	19.42	18.74			37.23	41.78	14.15	14.15
Nevada Northern Railroad	19.63	18.83	3.37	3.72	55.65	51.53	9.63	11.92
Pioche Pacific Railroad	24.48	25.50	.58	.60	45.77	43.49	5.79	6.54
San Pedro, Los Angeles and Salt Lake Railroad		26.54				53.46		7.07
Silver Peak Railroad	25.11	24.06	6.55	5.31	45.79	49.56	3.95	3.13
Southern Pacific Company	19.88	22.60	.79	.77	53.92	53.45	9.41	10.73
Tonopah and Goldfield Railroad	24.06	23.72	3.77	3.49	43.83	48.32	4.75	4.95
Tonopah and Tidewater Railroad	24.17	31.56	6.10	5.40	43.12	38.13	8.33	8.80
Virginia and Truckee Railroad	17.04	12.42	10.72	10.28	40.11	38.77	6.07	6.02
Western Nevada Railway	16.65	16.81	3.91	4.09	47.31	43.29	5.87	7.48
Western Pacific Railway	11.56	15.95	8.08	6.76	52.42	44.31	7.03	5.99

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total property investment		Total securities		Total other investments	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$617,251,407.47	\$820,923,116.41	-----	\$3,886,907.72	\$23,469,629.42	\$23,174,042.85
Bullfrog-Goldfield Railroad.....	3,763,578.81	3,758,234.70	-----	-----	-----	-----
Central Pacific Railroad.....	289,992,917.00	272,080,014.19	\$583,581.36	495,580.36	154,686.58	102,361.91
Eagle Salt Works Railroad.....	30,334.19	30,284.04	200,000.00	200,000.00	-----	-----
Eureka-Nevada Railway ^a	11,712.18	12,082.36	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.	10,352.80	5,327.00	-----	-----	471,027.44	403,876.56
Las Vegas and Tonopah Railroad.....	3,060,563.78	3,069,061.75	-----	-----	-----	-----
Nevada-California-Oregon Railroad.....	3,920,889.29	3,934,722.12	-----	-----	14,546.56	-----
Nevada Central Railroad.....	1,494,462.00	1,496,212.65	-----	-----	-----	-----
Nevada Copper Belt Railroad.....	1,064,667.27	1,080,529.03	-----	-----	-----	-----
Nevada Northern Railroad.....	2,641,336.85	2,594,345.16	500,000.00	-----	-----	-----
Pioche Pacific Railroad.....	-----	250,960.73	-----	-----	-----	-----
San Pedro, Los Angeles and Salt Lake Railroad.....	74,677,724.26	75,171,509.10	-----	-----	533,555.94	823,949.68
Silver Peak Railroad.....	209,168.71	209,168.71	-----	-----	-----	-----
Southern Pacific Company.....	31,641,971.66	32,581,044.51	209,962,246.31	209,782,692.82	255,477,421.97	267,185,117.67
Tonopah and Goldfield Railroad.....	3,657,044.92	3,660,843.41	-----	-----	11,621.44	10,979.02
Tonopah and Tidewater Railroad.....	4,157,336.08	4,172,838.93	350,000.00	350,000.00	-----	2,087.25
Virginia and Truckee Railroad.....	4,419,129.69	4,406,825.19	-----	-----	-----	-----
Western Pacific Railroad.....	155,586,826.09	156,132,316.69	99,900.00	276,339.78	175,439.78	-----
Totals.....	\$1,177,536,422.55	\$1,185,472,201.68	\$211,686,726.67	\$219,960,520.68	\$280,283,382.57	\$291,716,961.50

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Total working assets		Accrued income not due		Total deferred debit items	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$52,300,875.71	\$41,240,346.80	-----	\$321,124.42	\$6,294,905.81	\$5,801,406.67
Bullfrog-Goldfield Railroad	60,192.85	54,203.19	-----	-----	6,170,627.35	-----
Central Pacific Railroad	30,007,114.39	12,113,897.88	\$687.94	83,981.66	7,192,556.77	-----
Great Salt Works Railroad	4,632.86	3,520.67	-----	-----	-----	2,878.12
Eureka-Nevada Railway	9,905.74	9,464.06	-----	-----	-----	-----
Goldfield Consolidated M. & T. Co.	797,764.90	890,918.24	-----	-----	3,725.83	3,614.93
Las Vegas and Tonopah Railroad	40,333.35	48,144.02	-----	81.50	3,897.82	2,836.88
Nevada-California-Oregon Railway	590,437.86	481,729.10	-----	-----	643.96	2,834.92
Nevada Central Railroad	32,946.51	36,478.42	-----	-----	665,000.00	665,143.10
Nevada Copper Belt Railroad	39,478.09	21,683.12	-----	-----	-----	-----
Nevada Northern Railroad	983,418.46	1,145,291.20	-----	-----	-----	-----
Pioche Pacific Railroad	-----	7,927.77	-----	-----	-----	-----
San Pedro, Los Angeles and Salt Lake Railroad	3,155,816.56	3,290,706.84	1,426.66	1,453.05	1,793,540.25	1,712,029.63
Silver Peak Railroad	-----	-----	-----	-----	-----	-----
Southern Pacific Company	130,251,673.81	143,669,903.54	2,118,744.08	2,871,760.30	25,261,571.96	30,181,288.98
Tonopah and Goldfield Railroad	785,422.04	829,970.59	-----	-----	56,833.24	51,016.91
Tonopah and Tidewater Railroad	244,956.85	241,120.04	-----	-----	400,140.61	433,784.44
Virginia and Truckee Railway	180,194.51	235,243.67	-----	-----	60.00	-----
Western Pacific Railway	1,420,401.41	1,099,900.48	-----	-----	7,524,731.66	6,966,814.54
Totals	\$220,415,563.30	\$204,810,469.71	\$2,121,088.68	\$2,778,400.93	\$49,198,117.54	\$51,794,620.69

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—ASSETS

Company	Profit and loss—Balance		Grand total	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway		\$413,373.81	\$699,316,813.41	\$700,149,944.96
Bullfrog-Goldfield Railroad	\$436,817.64		4,286,064.77	4,236,160.96
Central Pacific Railway	16,110.04	18,601.10	307,930,865.10	291,046,463.36
Eagle Salt Works Railway	946.48	10,665.73	251,076.69	232,385.81
Eureka-Nevada Railway			22,963.40	34,960.27
Goldfield Consolidated M. & T. Co.			1,279,144.64	790,121.80
Las Vegas and Tonopah Railroad	73,614.60	129,774.68	3,198,237.66	3,250,686.38
Nevada-California-Oregon Railway			4,615,134.97	4,433,906.16
Nevada Central Railroad			1,628,065.47	1,636,625.99
Nevada Copper Belt Railroad	80,408.18	72,980.27	1,869,551.64	1,840,340.62
Nevada Northern Railway			3,624,766.31	3,739,686.86
Pioche Pacific Railroad				238,688.90
San Pedro, Los Angeles and Salt Lake Railroad	3,680,709.48	3,513,613.12	83,842,773.15	84,613,286.42
Silver Peak Railroad	686.68	706.54	239,863.29	239,877.25
Southern Pacific Company			654,603,623.79	685,641,807.77
Tonopah and Goldfield Railroad			4,510,921.74	4,452,809.38
Tonopah and Tidewater Railroad	302,105.75	356,866.77	5,464,629.29	5,686,642.43
Virginia and Truckee Railway	393,615.80	357,931.14	5,000,000.00	5,000,000.00
Western Pacific Railway	6,662,722.13	11,520,196.83	171,470,021.07	176,994,667.32
Totals	\$11,643,825.68	\$16,394,615.99	\$1,962,894,076.99	\$1,972,927,791.18

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Total stock		Total mortgage, bonded and secured debt		Working liabilities	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$305,080,530.00	\$310,055,530.00	\$322,439,045.00	\$316,469,045.00	\$13,321,704.68	\$10,924,423.80
Burlingame-Goldfield Railroad	2,000,000.00	2,000,000.00	1,839,000.00	1,839,000.00	438,729.06	337,056.86
Central Pacific Railway	84,676,500.00	84,676,500.00	200,018,397.79	200,214,397.79	907,912.42	967,633.29
Eagle Salt Works Railroad	200,000.00	200,000.00			51,076.59	62,386.81
Eureka-Nevada Railway ^a	2,500.00	2,500.00			17,743.40	29,876.59
Goldfield Consolidated M. & T. Co.	400,000.00	400,000.00			33,233.16	47,984.19
Las Vegas and Tonopah Railroad	1,500,000.00	1,500,000.00			1,671,862.86	1,727,763.86
Nevada-California-Oregon Railway	2,200,000.00	2,200,000.00	1,401,000.00	1,387,000.00	163,076.42	96,687.13
Nevada Central Railroad	750,000.00	750,000.00	750,000.00	750,000.00	1,922.61	1,163.50
Nevada Copper Belt Railroad	1,000,000.00	1,000,000.00	622,000.00	628,420.00	237,864.17	194,817.73
Nevada Northern Railway	2,000,000.00	2,000,000.00	1,000,000.00	1,000,000.00	190,869.12	192,280.53
Pioche Pacific Railroad	250,000.00	250,000.00				5,683.27
San Pedro, Los Angeles and Salt Lake Railroad	25,000,000.00	25,000,000.00	55,155,000.00	56,274,000.00	3,438,867.39	2,919,922.63
Silver Peak Railroad	200,000.00	200,000.00				
Southern Pacific Company	279,823,084.44	272,820,186.64	166,531,910.00	203,226,336.58	115,439,608.20	84,492,981.33
Tonopah and Goldfield Railroad	2,150,000.00	2,150,000.00	500,000.00	841,000.00	77,233.44	67,974.44
Tonopah and Tidewater Railroad	1,000,000.00	1,000,000.00			1,130,667.47	1,262,914.46
Virginia and Truckee Railroad	5,000,000.00	5,000,000.00	3,286,344.10	3,286,344.10		
Western Pacific Railway	75,000,000.00	75,000,000.00	75,081,250.00	75,017,800.00	19,580,880.22	23,312,976.28
Totals	\$780,983,725.64	\$786,208,725.64	\$828,122,946.89	\$890,932,343.47	\$156,680,767.19	\$126,656,493.69

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Accrued liabilities not due		Deferred credit items		Appropriated surplus	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$8,547,545.04	\$8,608,164.79	\$465,164.72	\$1,846,629.71	\$28,882,928.16	\$31,676,450.85
Bullfrog-Goldfield Railroad			325.71	106.10		
Central Pacific Railroad	202,786.99	2,778,751.17	43,794.54	89,070.89		4,104,448.48
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^a			2,320.00	2,584.68		
Goldfield Consolidated M. & T. Co.	2,500.20	5,955.54				
Las Vegas and Tonopah Railroad	8,491.86	9,486.26	18,442.85	13,335.26		
Nevada-California-Oregon Railway	10,475.72	10,646.75	9,903.11	8,621.12	481,576.76	495,516.74
Nevada Central Railroad		969.75	704.26	696.53		
Nevada Copper Belt Railroad	9,697.37	17,162.79				
Nevada Northern Railway	86,306.37	30,000.00				
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	92,657.55	143,380.26	156,258.21	175,963.54		10,000.00
Silver Peak Railroad						
Southern Pacific Company	9,510,319.01	6,671,455.33	13,681,780.19	11,547,419.24	1,608,142.40	1,015,444.86
Tonopah and Goldfield Railroad	18,794.99	13,665.82	2,377.05	2,850.10	516,588.50	621,462.50
Tonopah and Tidewater Railroad	38,238.72	37,425.78	304.00	868.59		
Virginia and Truckee Railway						
Western Pacific Railway	1,755,310.11	2,567,590.10	52,580.74	76,200.94		
Totals	\$20,235,278.93	\$20,919,604.34	\$14,441,925.38	\$13,764,224.20	\$31,499,233.82	\$37,923,323.43

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

COMPARATIVE GENERAL BALANCE SHEET—LIABILITIES

Company	Profit and loss—Balance		Grand total	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$20,569,800.81	\$20,569,800.81	\$699,316,818.41	\$700,149,944.96
Bullfrog-Goldfield Railroad	22,082,463.36	<i>1,733,336.37</i>	4,296,054.77	4,226,180.96
Central Pacific Railroad			307,880,855.10	291,046,483.35
Eagle Salt Works Railroad			251,076.59	252,386.81
Eureka-Nevada Railway			22,563.40	34,960.27
Goldfield Consolidated M. & T. Co.	843,351.19	336,232.07	1,279,144.64	790,121.80
Las Vegas and Tonopah Railroad			3,198,237.66	3,250,585.98
Nevada-California-Oregon Railroad	259,103.96	283,434.42	4,515,134.97	4,433,906.16
Nevada Central Railroad	25,428.60	32,677.21	1,528,055.47	1,535,525.99
Nevada Copper Belt Railroad			1,869,551.64	1,840,340.62
Nevada Northern Railroad	397,579.82	517,355.83	3,624,755.31	3,739,636.96
Pioche Pacific Railroad		3,205.23		288,888.50
San Pedro, Los Angeles and Salt Lake Railroad			83,842,773.15	84,513,266.42
Silver Peak Railroad	19,855.29	19,877.25	209,855.29	209,877.25
Southern Pacific Company	75,948,703.35	105,862,974.79	654,603,628.79	685,641,807.77
Tonopah and Goldfield Railroad		750,857.07	4,510,921.74	4,452,809.98
Tonopah and Tidewater Railroad	796,922.76		5,454,629.29	5,556,542.43
Virginia and Truckee Railway			5,000,000.00	5,000,000.00
Western Pacific Railway			171,470,021.07	175,994,567.32
Totals	\$120,982,209.14	\$126,533,076.41	\$1,952,894,076.99	\$1,972,927,791.18

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

^bBalance sheet figures of this company incomplete. Figures shown do not represent balance profit and loss, but are simply miscellaneous debits.

Italic figures denote deficit.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	General officers		Other officers		General office clerks		Station agents		Other station men		Enginemen	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$20.82	\$21.58	\$8.14	\$8.00	\$2.61	\$2.65	\$2.37	\$2.37	\$2.01	\$2.02	\$6.26	\$6.20
Bullfrog-Goldfield Railroad	11.62	16.27	7.16	7.13	3.54	3.69	4.28	4.27			9.12	9.21
Central Pacific Railway												
Eagle Salt Works Railroad	7.06	5.94	4.61	.83			2.68	2.80	1.90		2.25	
Eureka-Nevada Railway ^a	.82	.82	.71	.86							5.01	4.48
Goldfield Consolidated M. & T. Co.	7.48	7.48	6.46	6.19	3.13	3.26	3.64	3.72	4.07	4.67	5.60	5.00
Las Vegas and Tonopah Railroad	8.53	9.78	5.75	5.86	2.96	3.19	2.85	2.94	1.96	2.02	5.29	5.23
Nevada-California-Oregon Railway	9.88	9.88			4.94	4.90	3.62	3.62			5.77	4.23
Nevada Central Railroad	6.75	5.99	4.75	4.78	2.56	2.53	2.94	2.74	2.87	2.47	4.80	4.90
Nevada Copper Belt Railroad	9.65	9.28	4.88	8.39	3.42	3.26	3.39	2.97	2.84	2.13	4.78	4.68
Nevada Northern Railway											5.21	5.46
Pioche Pacific Railroad												
San Pedro, Los Angeles and Salt Lake Railroad	13.43	14.52	7.54	7.59	2.85	2.87	2.77	2.79	2.14	2.17	5.01	5.04
Silver Peak Railroad	1.64	1.64					2.88	2.88			5.69	5.57
Southern Pacific Company	22.69	25.13	8.23	9.53	2.73	2.83						
Tonopah and Goldfield Railroad	13.66	11.83	6.16	5.98	5.77	5.69	4.94	4.67	4.16	3.96	6.43	6.33
Tonopah and Tidewater Railroad	11.62	16.27	7.14	7.16	3.56	3.69	3.42	3.33			6.49	6.42
Virginia and Truckee Railway	10.96	10.96	4.11	4.11	3.89	4.35	2.96	2.96	2.09	1.97	5.00	4.99
Western Pacific Railway	26.90	23.16	8.07	8.04	3.29	3.31	2.74	2.78	2.44	2.52	6.02	6.03

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Firemen		Conductors		Other trainmen		Machinists		Carpenters		Other shopmen	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$3.83	\$3.82	\$5.94	\$5.70	\$3.50	\$3.50	\$4.09	\$4.18	\$3.01	\$3.06	\$2.54	\$2.57
Bullfinch-Goldfield Railroad	6.84	6.89	5.89	5.95	3.71	3.70					4.98	
Central Pacific Railway												
Elgin-Salt Wells Railroad												
Eureka Nevada Railway	3.01	2.98	3.60	3.56	2.42	2.24	3.18	3.54	3.70		3.21	3.36
Goldfield Consolidated M. & T. Co.	4.00	4.00	6.50	5.97	4.00	4.00		4.50			4.50	
Las Vegas and Tonopah Railroad	3.23	3.24	4.99	4.93	3.55	3.57			3.30	3.11	3.20	3.12
Nevada-California-Oregon Railway	3.35	3.52	3.68	4.04	2.83	2.59	3.89	3.34	3.26	3.21	3.11	2.91
Nevada Central Railroad	2.96	3.19	4.26	4.25	4.00	4.04	4.46	4.55	4.98	4.92	3.15	2.85
Nevada Copper Belt Railroad	3.45	3.27	4.42	4.25	3.80	3.60	4.31	4.41	4.00	5.62	3.19	3.36
Nevada Northern Railway	3.73	3.95	4.94	5.13	3.92	3.84	4.50	4.50	4.50	4.56	2.92	2.56
Pioche Pacific Railroad												
San Pedro, Los Angeles and Salt Lake Railroad	3.17	3.16	4.79	4.80	3.39	3.37	3.36	3.88	2.56	2.52	2.40	2.42
Silver Peak Railroad	4.89	4.76	3.26	3.25								
Southern Pacific Company												
Tonopah and Goldfield Railroad	4.24	4.20	5.53	5.48	3.75	3.77	4.97	5.26	4.82	5.08	4.17	4.21
Tonopah and Tidewater Railroad	4.29	4.23	6.01	6.02	3.73	3.84	3.86	3.75	4.00	4.00	3.32	3.37
Virginia and Truckee Railroad	3.49	3.50	3.98	3.99	3.80	3.31	4.30	4.57	3.95	4.12	3.41	3.36
Western Pacific Railway	3.84	3.88	5.19	5.20	3.56	3.55	4.28	4.33	3.43	3.44	2.53	2.62

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

AVERAGE DAILY COMPENSATION OF EMPLOYEES

Company	Section foremen		Other trackmen		Switch tenders, watchmen, etc.		Telegraph operators and dispatchers		Employees' account, floating equipment		All others	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2.18	\$2.17	\$1.49	\$1.48	\$1.51	\$1.61	\$3.11	\$3.16	\$3.11	\$3.18	\$2.27	\$2.31
Bullfrog-Goldfield Railroad	3.02	3.06	2.00	2.13	2.50	3.23	4.44	4.44			3.75	4.62
Central Pacific Railroad												
Eagle Salt Works Railway												
Eureka-Nevada Railway	2.59	2.23	2.16	2.14	2.12	2.06					2.45	2.33
Goldfield Consolidated M. & T. Co.	4.00	4.00	3.50	3.69								
Las Vegas and Tonopah Railroad	2.55	2.53	1.55	1.69	2.50						2.38	2.94
Nevada-California-Oregon Railroad	2.19	2.20	1.78	1.76							2.56	2.56
Nevada Central Railroad	2.75	2.75	2.00	2.00	3.00	3.00	3.29	3.28			1.77	1.72
Nevada Copper Belt Railroad	2.28	2.40	1.86	2.01			4.09	4.09			3.04	3.04
Nevada Northern Railroad	2.45	2.55	1.83	1.92			4.06	4.43			3.06	2.55
Pioche Pacific Railroad												
San Pedro, Los Angeles and Salt Lake Railroad	2.33	2.35	1.29	1.27	1.92	2.02	3.16	3.18			2.40	2.31
Silver Peak Railroad											4.72	
Southern Pacific Company	3.00	3.06	1.53	1.70			3.50	3.44				
Tonopah and Goldfield Railroad	3.38	3.40	2.06	2.14	3.45	3.46	4.26	4.27			3.28	3.43
Tonopah and Tidewater Railroad	3.00	3.00	1.75	1.75	2.32	2.33	4.67	4.21			3.46	2.89
Virginia and Truckee Railway	2.85	2.85	2.19	2.22	2.61	2.61	4.85	4.97			3.20	2.88
Western Pacific Railway	2.17	2.20	1.69	1.78	1.66	1.90	4.20	4.09	3.07	3.20	2.50	2.51

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Number of passengers carried earning revenue		Number of passengers carried one mile		Average distance carried	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	11,608,596	11,882,779	1,159,860,097	1,146,908,853	99.91	96.51
Burlington Railroad	5,287	4,244	339,215	277,900	64.16	65.48
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway	2,824	2,743	142,466	121,841	50.45	44.24
Goldfield Consolidated M. & T. Co.	6,067	5,474	673,917	624,380	110.71	114.06
Las Vegas and Tonopah Railroad	29,373	23,747	2,471,407	2,028,089	84.14	86.24
Nevada-California-Oregon Railway	2,235	2,081	185,065	162,941	80.63	79.44
Nevada Central Railroad	23,967	17,738	350,711	245,938	14.63	13.86
Nevada Copper Belt Railroad	332,969	330,860	6,411,050	6,164,587	19.25	18.63
Nevada Northern Railway						
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	1,541,250	1,498,406	134,103,010	122,361,053	87.01	81.87
Silver Peak Railroad	2,098	1,789	36,715	31,118	17.50	17.39
Southern Pacific Company	35,963,455	36,645,269	1,433,822,748	1,348,296,556	39.85	36.79
Tonopah and Goldfield Railroad	36,797	34,657	1,945,443	1,828,274	52.87	52.75
Tonopah and Tidewater Railroad	7,338	8,346	834,045	893,607	113.66	107.06
Virginia and Truckee Railway	83,963	75,937	2,266,387	1,910,025	26.96	25.16
Western Pacific Railway	279,854	236,162	66,100,079	62,075,775	236.19	262.86
Totals	49,946,184	50,770,202	2,809,488,364	2,688,840,197		

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Average amount received from each passenger		Average receipts per passenger per mile		Passenger service train revenue per mile of road	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2.19688	\$2.07301	\$0.02198	\$0.02148	\$3,846.95	\$3,671.66
Bullfrog-Goldfield Railway	8.57861	3.58603	.05578	.05491	367.14	263.07
Central Pacific Railway						
Eagle Salt Works Railway ^a	4.87767	4.22698	.09669	.09555	172.95	157.24
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.	5.75231	5.72901	.06195	.06022		
Las Vegas and Tonopah Railroad	4.88838	5.04705	.06810	.05910	234.09	215.90
Nevada-California-Oregon Railway	6.29791	6.31989	.07810	.07789	734.23	612.33
Nevada Central Railroad	1.12437	1.06549	.07683	.06901	241.96	218.42
Nevada Copper Belt Railroad	.52224	.44523	.02712	.02390	770.99	567.02
Nevada Northern Railway					1,207.63	1,067.79
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	2.03551	2.01121	.02339	.02462	3,249.59	3,074.06
Silver Peak Railroad	1.74794	1.72897	.09888	.09828	268.27	232.38
Southern Pacific Company	.89010	.81917	.02234	.02226	5,762.23	6,328.76
Tonopah and Goldfield Railroad	2.88676	2.88518	.05468	.05468	1,241.76	1,195.63
Tonopah and Tidewater Railroad	5.88527	4.83171	.05178	.04513	324.96	309.01
Virginia and Truckee Railroad	.96624	.96601	.03601	.03961	1,413.85	1,331.84
Western Pacific Railway	4.89853	5.30878	.02049	.02020	1,574.83	1,462.18

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Passenger service train revenue per train mile		Number of tons of freight carried earning revenue		Number of tons of freight carried one mile	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$1.55943	\$1.46988	21,131,338	21,540,082	6,287,811,183	5,893,379,432
Bullfrog-Goldfield Railroad	.55033	.48090	23,357	21,618	1,094,785	1,269,062
Central Pacific Railroad						
Eagle Salt Works Railroad	.60443	.41463	598	1,000	7,714	12,900
Eureka-Nevada Railway ^a			7,925	8,410	420,459	413,913
Goldfield Consolidated M. & T. Co.	.35399	.35223	349,391	356,725	873,478	891,813
Las Vegas and Tonopah Railroad	1.17565	1.03986	41,661	37,647	6,068,727	4,388,723
Nevada-California-Oregon Railroad	.38716	.39067	47,064	46,703	5,316,027	5,672,215
Nevada Central Railroad	.86907	.86029	5,963	5,768	491,661	508,490
Nevada Copper Belt Railroad	.99479	.86676	326,859	200,705	8,517,070	4,487,556
Nevada Northern Railroad			8,717,011	4,242,676	104,507,372	120,123,491
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	1.84669	1.47159	3,322,382	3,401,462	546,024,618	602,603,929
Silver Peak Railroad	.37054	.31860	2,307	3,334	40,372	46,755
Southern Pacific Company	1.66409	1.57105	20,515,403	20,388,210	4,759,687,174	4,790,340,390
Tonopah and Goldfield Railroad	1.89607	1.77124	313,138	305,430	9,625,423	9,244,671
Tonopah and Tidewater Railroad	.51514	.49724	68,687	77,548	8,652,239	8,531,128
Virginia and Truckee Railroad	.82301	.78777	124,796	119,795	4,910,214	4,735,086
Western Pacific Railroad	1.07777	1.04180	1,215,275	1,199,940	601,416,992	596,526,774
Totals			51,213,175	51,916,600	12,324,915,396	11,982,940,699

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Average distance haul of one ton		Average amount received for each ton		Average receipts per ton per mile	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	296.61	273.60	\$3.05460	\$2.53607	\$0.01080	\$0.01087
Bullfrog-Goldfield Railroad	72.56	72.53	3.08113	2.53602	.04246	.03868
Central Pacific Railroad	12.90	12.90	1.00722	1.49224	.07908	.11622
Eagle Salt Works Railway	53.06	49.22	4.96122	4.52344	.08851	.09191
Eureka-Nevada Railway ^a	2.50	2.50	25000	25000	.00000	.00000
Goldfield Consolidated M. & T. Co.	145.59	116.60	3.52784	3.38347	.02422	.08373
Las Vegas and Tonopah Railroad	112.98	121.45	4.79386	4.70518	.04243	.03877
Nevada-California-Oregon Railroad	82.15	86.31	5.27443	4.83821	.06419	.05475
Nevada Central Railroad	26.05	22.35	5.55551	4.83801	.02131	.02367
Nevada Copper Belt Railroad	28.11	28.31	.39419	.37059	.01366	.01309
Nevada Northern Railroad	164.05	177.17	1.90872	1.39404	.11761	.11761
Pioche Pacific Railroad	17.50	14.02	3.45700	2.03090	.01146	.01146
San Pedro, Los Angeles and Salt Lake Railroad	232.01	232.58	2.74915	2.49291	.19754	.17776
Silver Peak Railroad	30.74	30.27	1.75907	2.71322	.01166	.01167
Southern Pacific Company	123.78	113.88	3.87661	3.62529	.06723	.06906
Tonopah and Goldfield Railroad	39.35	39.53	1.61967	1.49200	.08132	.08184
Tonopah and Tidewater Railroad	494.88	496.55	3.81447	3.89681	.04116	.08775
Virginia and Truckee Railroad					.00771	.00785
Western Pacific Railway						

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Freight revenue per mile of road		Freight revenue per train mile		Operating revenue per mile of road	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$7,854.17	\$7,319.76	\$3,60806	\$3,70212	\$11,935.69	\$11,206.08
Bullfrog-Goldfield Railroad	866.96	753.94	1,58233	1,37600	1,193.03	1,023.63
Central Pacific Railway	48.69	116.22	70778	1,70952	46.69	116.22
Eureka-Nevada Railway ^a	468.07	452.88	1,71565	1,88523	665.46	650.15
Goldfield Consolidated M. & T. Co.	22,057.62	22,520.52			22,057.52	22,680.74
Las Vegas and Tonopah Railroad	733.53	738.71	1,20323	1,20518	981.30	972.17
Nevada-California-Oregon Railway	945.49	921.65	2,19003	2,43011	1,693.26	1,539.86
Nevada Central Railroad	338.23	238.40	1,08757	1,33230	589.21	522.90
Nevada Copper Belt Railroad	4,375.26	3,090.42	4,87027	4,30797	5,442.78	3,989.19
Nevada Northern Railroad	8,660.79	9,523.23	6,10443	5,99539	9,982.37	10,687.46
Pioche Pacific Railroad		852.76		4,06221		882.76
San Pedro, Los Angeles and Salt Lake Railroad	5,590.23	6,097.58	4,21128	3,84706	9,025.24	9,379.53
Silver Peak Railroad	456.73	474.93	62946	64706	732.33	718.15
Southern Pacific Company	8,800.67	8,448.33	5,04203	4,96973	14,846.64	14,045.53
Tonopah and Goldfield Railroad	4,984.00	4,942.32	8,00174	7,59142	6,301.10	6,236.19
Tonopah and Tidewater Railroad	1,472.34	1,554.94	2,33268	2,42340	1,814.99	1,882.38
Virginia and Truckee Railroad	2,196.14	2,643.70	3,47751	3,11900	4,442.92	4,010.88
Western Pacific Railway	4,947.68	4,977.48	2,86116	3,26216	6,586.93	6,492.91

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Operating revenue per train mile		Operating expenses per mile on road		Operating expenses per train mile	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$2,710,772	\$2,668,836	\$7,766.92	\$7,209.85	\$1,729.95	\$1,716.51
Bullfrog-Goldfield Railroad	2,136,19	1,868,22	1,117.77	1,069.94	2,001.42	2,007.47
Central Pacific Railway	707,78	1,709,82	276.25	101.85	4,172.44	1,468.12
Eagle Salt Works Railway	2,300,87	1,600,23	7,278.20	7,046.97	1,969.00	1,977.66
Eureka-Nevada Railway	1,609,67	1,590,99	1,186.83	946.47	1,570.06	1,537.56
Goldfield Consolidated M. & T. Co.	1,609,67	1,590,99	1,186.83	946.47	1,570.06	1,537.56
Las Vegas and Tonopah Railroad	8,427.8	9,899.8	1,568.94	1,749.57	1,312.50	1,231.16
Nevada-California-Oregon Railway	3,427.8	2,854.15	2,653.74	2,236.98	1,312.50	1,231.16
Nevada Central Railroad	3,427.8	2,854.15	2,653.74	2,236.98	1,312.50	1,231.16
Nevada Copper Belt Railroad	3,819.87	3,784.33	4,831.19	5,696.98	1,852.42	1,904.45
Nevada Northern Railway	2,953.22	4,082.31	6,003.73	6,998.30	1,944.53	3,105.50
Pioche Pacific Railroad	1,011.50	2,571.03	772.41	877.41	1,059.96	1,165.56
San Pedro, Los Angeles and Salt Lake Railroad	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Shirer Pacific Company	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Southern Pacific Company	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Tonopah and Goldfield Railroad	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Tonopah and Tidewater Railroad	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Virginia and Truckee Railroad	2,921.48	2,835.44	8,516.81	8,894.63	1,876.92	1,894.57
Western Pacific Railway	2,065.82	2,195.00	4,780.13	5,318.06	1,491.46	1,797.83

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Average operating revenue or deficit per mile of road		Average number of passengers per car mile		Average number of passengers per train mile	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$4,163.77	\$3,988.13	14	14	57	55
Bullfrog-Goldfield Railroad	75.26	76.30	5	3	7	6
Central Pacific Railroad	222.56	14.37	6	4	6	4
Eagle Salt Works Railway	124.80	204.23				
Eureka-Nevada Railway	14,779.32	15,564.87	5	5	6	5
Goldfield Consolidated M. & T. Co.	25.97	26.70	6	3	17	14
Las Vegas and Tonopah Railroad	504.43	289.49	3	3	3	3
Nevada-California-Oregon Railway	80.96	107.84	9	6	9	6
Nevada Central Railroad	2,789.64	1,693.81	19	18	32	31
Nevada Copper Belt Railroad	5,131.17	5,060.50				
Nevada Northern Railroad		196.52				
Pioche Pacific Railroad	3,021.51	3,011.24	14	11	67	52
San Pedro, Los Angeles and Salt Lake Railroad	84.44	40.73				2
Silver Peak Railroad	6,329.33	5,650.90	16	16	63	59
Southern Pacific Company	2,943.47	2,516.53	13	12	26	25
Tonopah and Goldfield Railroad	755.04	745.81	4	4	7	8
Tonopah and Tidewater Railroad	1,289.21	954.45	14	12	20	17
Virginia and Truckee Railway	1,808.80	1,174.85	10	9	48	47
Western Pacific Railway						

*Figures taken from report of Nevada Transportation Company which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

GENERAL STATISTICS

Company	Average number of passenger cars per train mile		Average number of tons of freight per loaded car mile		Average number of tons of freight per train mile	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	6.11	5.96	15.55	15.75	350.36	357.15
Bullfrog-Goldfield Railroad	1.71	2.00	14.28	13.70	36.56	34.49
Central Pacific Railroad						
Eagle Salt Works Railroad			18.11	23.33	9.06	14.71
Eureka-Nevada Railway ^a	1.00	1.00	6.47	7.32	18.34	20.51
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	1.01	1.00	21.89	16.06	49.65	35.72
Nevada-California-Oregon Railroad	3.80	3.73	7.47	7.88	51.61	62.69
Nevada Central Railroad	1.00	1.00	6.98	7.69	16.94	24.33
Nevada Copper Belt Railroad	1.00	1.00	35.95	30.89	228.45	150.73
Nevada Northern Railroad	2.61	2.66	41.72	41.88	446.72	468.06
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	6.73	6.68	19.40	19.01	361.94	335.62
Silver Peak Railroad			28.82	27.85	31.90	36.40
Southern Pacific Company	5.86	5.63	17.78	17.68	431.12	430.62
Tonopah and Goldfield Railroad	3.37	3.30	22.29	21.38	139.83	128.55
Tonopah and Tidewater Railroad	2.15	2.08	19.78	19.73	74.48	76.11
Virginia and Truckee Railroad	2.16	2.13	21.71	20.02	84.48	82.63
Western Pacific Railroad	6.66	6.96	17.73	18.28	369.90	408.08

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

GENERAL STATISTICS

Company	Average number of freight cars per ton mile		Average number of loaded cars per train mile		Average number of empty cars per train mile		Average mileage operated during year	
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	31.77	32.49	22.63	22.68	8.82	8.91	8,218.27	8,345.79
Bullfrog-Goldfield Railroad	4.28	3.89	2.56	2.51	1.72	1.37	83.01	83.01
Central Pacific Railway								
Eagle Salt Works Railway	1.00	1.00	.50	.50	.50	.50	12.90	12.90
Eureka-Nevada Railway	3.94	4.01	2.84	2.80	1.10	1.21	84.00	84.00
Goldfield Consolidated M. & T. Co.							3.96	3.96
Las Vegas and Tonopah Railroad	3.70	3.79	2.26	2.22	1.44	1.57	200.46	200.46
Nevada-California-Oregon Railroad	11.47	13.25	6.91	7.96	3.60	4.32	288.88	288.88
Nevada Central Railroad	4.31	5.72	2.42	3.16	1.88	2.56	93.30	93.30
Nevada Copper Belt Railroad	12.62	9.91	6.35	4.96	6.16	3.92	41.60	41.60
Nevada Northern Railroad	21.17	21.63	10.70	10.94	9.44	9.69	166.10	166.10
Pioche Pacific Railroad							16.00	16.00
San Pedro, Los Angeles and Salt Lake Railroad	27.10	27.05	18.66	17.96	7.48	8.44	1,132.91	1,132.91
Silver Peak Railroad	.21	.22	.12	.13	.09	.09	17.60	17.60
Southern Pacific Company	35.28	35.78	24.25	24.49	10.03	10.31	6,318.61	6,456.66
Tonopah and Goldfield Railroad	10.66	10.52	6.27	6.01	3.84	4.01	110.82	110.46
Tonopah and Tidewater Railroad	5.38	5.78	3.77	3.96	1.61	1.88	180.85	180.85
Virginia and Truckee Railway	5.72	5.14	3.69	4.13	1.72	1.80	67.48	67.48
Western Pacific Railway	30.48	33.18	20.87	22.34	8.60	9.84	939.42	939.42
Totals							17,907.37	18,189.88

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Grain		Flour		Other mill products	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	1,428,680	1,242,297	453,775	467,440	241,620	286,041
Bullfrog-Goldfield Railroad			239	110	144	
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway ^a	337	547	71	120		
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	510	688	317	369	90	
Nevada-California-Oregon Railway	1,732	1,117	574	347	446	254
Nevada Central Railroad	145	210	129	182		
Nevada Copper Belt Railroad	93	567	866	179		
Nevada Northern Railway	1,267	1,146	1,247	1,347	38	15
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	85,504	113,305	18,412	19,045	27,662	23,424
Silver Peak Railroad	33	16	33	33	2	3
Southern Pacific Company	667,260	561,387	109,939	118,022	264,565	253,940
Tonopah and Goldfield Railroad	1,469	1,153	856	823	147	136
Tonopah and Tidewater Railroad			231	196	219	311
Virginia and Truckee Railroad	1,237	2,145	358	213	109	272
Western Pacific Railroad	36,745	26,553	10,545	12,154	6,945	8,102
Totals	2,213,012	1,951,113	597,182	620,620	542,280	572,398

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Hay		Tobacco		Cotton	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	458,627	428,884				
Bullfinch Goldfield Railroad.....	20					
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....	15					
Eureka Nevada Railway.....	366	308			46,454	48,119
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	208	229				
Nevada-California-Oregon Railroad.....	2,557	899				
Nevada Central Railroad.....	147	38				
Nevada Copper Belt Railroad.....	68	27				
Nevada Northern Railroad.....	615	540				
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....	24,651	22,821	79	218	11	273
Silver Peak Railroad.....	35	12				
Southern Pacific Company.....	529,645	456,596	6,404	7,853	41,528	81,238
Tonopah and Goldfield Railroad.....	3,149	2,585				
Tonopah and Tidewater Railroad.....	121	351				
Virginia and Truckee Railroad.....	6,400	4,452				
Western Pacific Railroad.....	14,208	12,918	3,973	5,959	14,794	10,544
Totals.....	1,040,331	980,662	10,456	14,000	108,782	90,169

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Fruit and vegetables		Other products of agriculture		Total products of agriculture	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	1,174,477	1,282,199	212,777	257,263	4,014,410	3,982,233
Burlington-Goldfield Railroad	125	282			523	362
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka-Nevada Railway*	6	35			15	1,010
Goldfield Consolidated M. & T. Co.					778	
Las Vegas and Tonopah Railroad	2,327	2,317				
Nevada-California-Oregon Railway	2,945	497	155	99	3,422	3,603
Nevada Central Railroad	13				6,329	3,213
Nevada Copper Belt Railroad	2,130	3,337		59	494	430
Nevada Northern Railway	1,403	1,651	56		2,657	4,169
Pioche Pacific Railroad					4,626	4,699
San Pedro, Los Angeles and Salt Lake Railroad	141,027	208,626				
Silver Peak Railroad	36	32	6,225	7,881	303,571	336,594
Southern Pacific Company				3	139	104
Topopah and Goldfield Railroad	2,069,921	2,212,364	109,210	104,336	3,798,750	3,745,633
Topopah and Tidewater Railroad	1,933	2,703	49	108	7,603	7,538
Virginia and Truckee Railroad	137	111			768	959
Western Pacific Railroad	977	1,254	10	15	9,121	8,357
	88,454	86,950	11,455	9,987	187,129	173,067
Totals	3,453,310	3,752,318	339,927	379,701	8,330,290	8,310,981

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Live stock				Dressed meats				Other packing-house products			
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	1,069,238	1,009,298	41,440	52,655	70,916	64,393						
Bulfinch-Goldfield Railroad.....		11										
Central Pacific Railroad.....												
Eagle Salt Works Railroad.....												
Eureka-Nevada Railway ^a	550	360	4	18								
Goldfield Consolidated M. & T. Co.												
Las Vegas and Tonopah Railroad.....	219	24,170										
Nevada-California-Oregon Railway.....	17,460	2,534										
Nevada Central Railroad.....	2,119	2,817										
Nevada Copper Belt Railroad.....	789	2,062										
Nevada Northern Railway.....	2,817											
Pioche Pacific Railroad.....												
San Pedro, Los Angeles and Salt Lake Railroad.....	34,120	48,392	435	404	4,192	4,450						
Silver Peak Railroad.....			46	46	18	18						
Southern Pacific Company.....	466,799	466,191	31,353	36,803	40,191	34,418						
Tonopah and Goldfield Railroad.....	638	446	542	511	141	116						
Tonopah and Tidewater Railroad.....		126										
Virginia and Truckee Railway.....	9,722	9,688										
Western Pacific Railway.....	35,148	35,485										
Totals	1,639,609	1,795,658	73,822	89,963	120,060	108,015						

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Poultry, game and fish		Hides and leather		Wool	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	13,370	15,982	11,390	8,382	15,372	15,988
Bullfrog-Goldfield Railroad						
Central Pacific Railroad						
Eagle Salt Works Railroad						
Eureka Nevada Railway ^a			2	8	91	199
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railroad						
Nevada Central Railroad			103	27	678	1,465
Nevada Copper Belt Railroad					152	96
Nevada Northern Railroad			84	66	21	184
Pioche Pacific Railroad	10				849	888
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	2,018	2,409	2,147	2,908	3,169	6,478
Southern Pacific Company	25,778	30,819	16,917	19,980	11,678	11,425
Tonopah and Goldfield Railroad						16
Tonopah and Tidewater Railroad						
Virginia and Truckee Railway						
Western Pacific Railway	3,835	4,819	2,624	10	241	511
Totals	45,011	53,809	33,257	2,024	1,406	3,768
				83,315	83,185	40,467

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Other products of animals		Total products of animals		Anthracite coal	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	146,614	156,618	1,368,330	1,323,129	59,671	52,126
Bullfrog-Goldfield Railroad.....				11		
Central Pacific Railway.....						
Eagle Salt Works Railroad.....			647	585		
Eureka-Nevada Railway ^a						
Goldfield Consolidated M. & T. Co.		45	255	153		
Las Vegas and Tonopah Railroad.....	36		18,298	25,482		
Nevada-California-Oregon Railway.....			2,271	2,823		
Nevada Central Railroad.....			2,781	2,001		
Nevada Copper Belt Railroad.....			780	2,001		
Nevada Northern Railway.....	220	208	8,490	2,704		
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....	26,798	15,674	74,839	75,605	363	25
Silver Peak Railroad.....	26	25	92	93		
Southern Pacific Company.....	155,012	172,864	747,728	771,507		
Tonopah and Goldfield Railroad.....	68	121	1,614	1,432		
Tonopah and Tidewater Railroad.....				1,126		
Virginia and Truckee Railroad.....			9,983	10,209	40	72
Western Pacific Railway.....	5,043	4,133	52,454	54,719	4,285	1,479
Totals.....	335,812	349,189	2,280,756	2,270,615	64,359	53,702

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Bituminous coal		Coke		Ores	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	2,942,625	2,967,681	255,944	154,763	2,620,504	3,415,901
Bullfrog-Goldfield Railroad	1,162	167			58	26
Central Pacific Railroad						
Eagle Salt Works Railroad	89	32			2,062	2,916
Eureka-Nevada Railway ^a	496	423			349,891	356,725
Goldfield Consolidated M. & T. Co.					20,871	16,309
Las Vegas and Tonopah Railroad	2,946	4,181	178	96	512	496
Nevada-California-Oregon Railroad	1,397	591			241	86
Nevada Central Railroad	1,323	560				
Nevada Copper Belt Railroad	2,069	1,747		6	273,312	161,225
Nevada Northern Railroad	111,967	146,951	745	762	3,332,460	3,739,719
Pioche Pacific Railroad						6,962
San Pedro, Los Angeles and Salt Lake Railroad	226,527	259,658	33,869	50,306	796,333	716,780
Silver Peak Railroad	228	211			43	20
Southern Pacific Company	291,960	296,133	163,369	120,239	608,963	739,856
Tonopah and Goldfield Railroad	11,850	9,463	374	361	233,299	234,604
Tonopah and Tulewater Railroad	1,341	411			4,197	13,135
Virginia and Truckee Railroad	5,147	4,968	47	57	2,120	1,065
Western Pacific Railroad	219,596	306,630	2,867	4,096	3,046	4,017
Totals	3,809,725	3,930,952	447,455	330,670	8,254,412	9,409,764

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Stone, sand, etc.		Other products of mines			Total products of mines	
	1913	1914	1913	1914		1913	1914
Atchison, Topeka and Santa Fe Railway	1,595,414	1,610,002	1,369,221	1,783,022		8,843,379	9,883,385
Bullfrog-Goldfield Railroad	1,480	436	7,809			10,499	629
Central Pacific Railroad			544	1,000		583	1,032
Eagle Salt Works Railroad	30	61	27	44		2,596	3,444
Eureka-Nevada Railway						349,391	356,725
Goldfield Consolidated M. & T. Co.	217	387	15	47		24,227	20,999
Las Vegas and Tonopah Railroad	460	65	470	571		1,839	1,725
Nevada-California-Oregon Railway						1,564	646
Nevada Central Railroad	430		31,176	17,868		307,016	180,846
Nevada Copper Belt Railroad			32,313	34,500		3,543,718	4,013,219
Nevada Northern Railway	66,273	89,297					6,962
Pioche Pacific Railroad	564,765	600,542	131,214	109,547		1,755,081	1,777,040
San Pedro, Los Angeles and Salt Lake Railroad						353	221
Silver Peak Railroad	3,340,765	3,441,533	1,966,272	1,931,412		6,351,409	6,519,173
Southern Pacific Company	1,715	1,363	211	151		252,429	245,942
Tonopah and Goldfield Railroad	1,479	1,359	40,432	37,010		47,449	51,914
Tonopah and Tidewater Railroad	328	786	58,323	56,870		66,005	63,833
Virginia and Truckee Railway	132,207	79,186	12,711	10,682		374,704	405,093
Western Pacific Railway							
Totals	5,705,553	5,824,996	3,650,737	3,982,724		21,982,241	23,532,828

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Lumber		Other forest products		Total forest products	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	976,690	985,245			1,452,977	1,287,987
Bullfrog-Goldfield Railroad	2,419	2,141	477,387	352,692	2,419	2,141
Central Pacific Railroad						
Eagle Salt Works Railway						
Eureka-Nevada Railway	1,379	709	28		1,405	709
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	5,515	5,399	286		5,811	5,399
Nevada-California-Oregon Railroad	7,706	2,875	476		8,181	3,728
Nevada Central Railroad	226	830	112		338	474
Nevada Copper Belt Railroad	6,284	3,267	422		6,686	3,950
Nevada Northern Railroad	19,766	13,197			19,766	13,197
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	566,088	502,409	3,682		569,770	510,585
Silver Peak Railroad	88	183	56		1,223	1,406
Southern Pacific Company	3,196,879	3,241,860	448,587		3,645,466	3,710,172
Tonopah and Goldfield Railroad	17,040	15,071	1,955		2,291	18,995
Tonopah and Tidewater Railroad	3,020	3,796	326		3,346	6,108
Virginia and Truckee Railroad	5,550	4,871	9,507		15,057	14,425
Western Pacific Railroad	142,095	118,458	10,989		153,084	127,555
Totals	4,949,624	4,849,811	963,821	855,335	5,903,445	5,705,146

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Petroleum and other oils		Sugar		Naval stores	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	561,735	465,968	134,927	136,419		
Bullfrog-Goldfield Railroad	276	9,996		73		
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railway*	264	277	9	40		
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	2,828	996	73	36		
Nevada Central Railroad	908	792	501	707		
Nevada Copper Belt Railroad	119	203	72	73		
Nevada Northern Railroad	1,991	563	21	36		
Pioche Pacific Railroad	85,606	90,363	313	322		
San Pedro, Los Angeles and Salt Lake Railroad	22,044	27,837	28,121	31,271	52	43
Silver Peak Railroad	213	269	17	17		
Southern Pacific Company	332,694	284,749	302,277	312,446	1,374	896
Tonopah and Goldfield Railroad	10,234	11,211	332	575		
Tonopah and Tidewater Railroad	327	583	18	73		
Virginia and Truckee Railway	7,744	7,188	244	166		
Western Pacific Railway	65,115	88,650	32,625	28,846	50	85
Totals	1,092,093	969,545	499,568	611,100	1,476	1,026

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Iron, pig and bloom		Iron and steel rails		Other castings and machinery	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	49,176	39,112	54,423	58,615	431,935	390,034
Burlington Railroad.....			133	226	682	950
Central Pacific Railway.....						
Eagle Salt Works Railroad.....						
Eureka Nevada Railway.....			21	19	339	337
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....			39	108	360	516
Nevada-California Railroad.....			64	47	272	328
Nevada Central Railway.....					17	91
Nevada Copper Belt Railroad.....					240	972
Nevada Northern Railway.....	518	74	160	54	1,515	1,908
Pack and Pacific Railroad.....		213	617	439		
Salt Lake and Salt Lake Railroad.....						
Silver Peak Railroad.....	8,422	15,909	3,477	8,060	54,390	51,703
Southern Pacific Company.....			18	12		
Tonopah and Goldfield Railroad.....	89,137	63,078	140,618	116,670	361,707	308,625
Tonopah and Tidewater Railroad.....	20	20	249	309	1,133	1,450
Virginia and Truckee Railroad.....			133	100	487	550
Western Pacific Railway.....	5,819	155	57		474	491
		3,186	17,820	7,109	56,238	56,243
Totals	153,092	121,697	217,829	191,768	908,305	808,969

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Bar and sheet metal		Cement, brick and lime		Agricultural implements	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railroad.....	183,707	139,828	1,460,212	1,360,133	74,097	72,623
Bullfrog-Goldfield Railroad.....	219	3,854	3,854	3,221		
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....	58		253	425		7
Eureka-Nevada Railway.....						
Goldfield Consolidated M. & T. Co.	21	36	87	1,305		91
Las Vegas and Tonopah Railroad.....	94	232	896	589	50	15
Nevada-Central Railroad.....			40	207		15
Nevada Copper Belt Railroad.....				2,667	16	19
Nevada Northern Railway.....	1,045	2,308	5,444	5,928	16	19
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....	28,821	28,040	211,674	206,227	1,524	2,780
Silver Peak Railroad.....	55	44	442	386		
Southern Pacific Company.....	178,574	137,940	1,508,185	1,221,037	31,474	27,880
Tonopah and Goldfield Railroad.....	343	175	3,236	2,579		116
Tonopah and Tidewater Railroad.....	220	125	3,468	3,560		
Virginia and Truckee Railroad.....	82		1,581	1,604	37	20
Western Pacific Railroad.....	23,352	19,378	26,267	33,342	3,536	3,674
Totals.....	416,591	328,231	3,225,623	2,843,222	110,724	107,250

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Wagons, carriages, tools, etc.		Wines, liquors and beers		Household goods and furniture	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	62,422	53,046	125,210	117,501	124,446	107,932
Bullfrog-Goldfield Railroad.....		6	342	190	10	15
Central Pacific Railroad.....						
Eagle Salt Works Railroad.....	3					
Eureka-Nevada Railway ^a			57	131		20
Goldfield Consolidated M. & T. Co.....						
Las Vegas and Tonopah Railroad.....			441	620		
Nevada-California-Oregon Railway.....	234	33	235	246	167	211
Nevada Central Railroad.....		30	44	31		
Nevada Copper Belt Railroad.....		84	330	408	4	35
Nevada Northern Railroad.....	15		2,713	2,722	51	67
Pioche Pacific Railroad.....						
San Pedro, Los Angeles and Salt Lake Railroad.....	6,925	7,312	12,835	15,315	9,557	8,039
Silver Peak Railroad.....			100	143	13	7
Southern Pacific Company.....	39,973	42,537	280,780	266,491	53,919	49,218
Tonopah and Goldfield Railroad.....	16	29	2,200	2,451	68	162
Tonopah and Tidewater Railroad.....	10	5	841	265	20	139
Virginia and Truckee Railroad.....	40	70	259	220	10	96
Western Pacific Railway.....	8,238	5,401	27,793	22,752	12,920	10,440
Totals.....	117,927	108,507	453,786	429,334	201,275	176,400

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Other manufactures		Total manufactures		Merchandise	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	739,104	711,136	4,000,554	3,652,287	1,271,055	1,279,789
Bullfrog-Goldfield Railway	2,309	1,664	7,843	16,106	1,945	1,770
Central Pacific Railway						
Eagle Salt Works Railway						
Eureka-Nevada Railroad ^a	263	488	1,272	1,744	1,132	611
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	964	891	4,783	4,507	1,963	2,051
Nevada-California-Oregon Railway	406	602	3,910	3,883	8,507	8,452
Nevada Central Railroad			232	620	793	758
Nevada Copper Belt Railroad	448	976	3,254	5,828	4,938	3,679
Nevada Northern Railway	2,994	4,979	100,852	109,302	10,538	9,498
Pioche Pacific Railroad						
San Pedro, Los Angeles and Salt Lake Railroad	59,013	63,305	446,947	465,841	135,932	135,569
Silver Peak Railroad	113	110	1,073	1,132	96	111
Southern Pacific Company	631,239	608,643	3,951,951	3,535,222	1,546,368	1,504,254
Tonopah and Goldfield Railroad	3,401	3,409	21,237	22,486	8,988	7,671
Tonopah and Tidewater Railroad	2,437	3,080	7,661	8,370	2,771	3,162
Virginia and Truckee Railroad	1,873	2,078	12,401	11,987	10,096	10,560
Western Pacific Railway	72,458	62,539	352,281	341,605	78,221	81,354
Totals	1,517,021	1,463,850	8,916,311	8,190,899	3,083,273	3,049,189

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TONNAGE STATISTICS
TOTAL TONNAGE OF VARIOUS COMMODITIES CARRIED DURING YEAR

Company	Miscellaneous		Total tonnage—Entire line	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	180,633	151,342	21,131,338	21,540,082
Bullfrog-Goldfield Railroad	122	600	23,367	21,618
Centra Pacific Railway				
Eagle Salt Works Railroad	96	407	7,925	8,410
Eureka-Nevada Railway			849,391	858,725
Goldfield Consolidated M. & T. Co.	1,220	985	41,081	87,647
Las Vegas and Tonopah Railroad			47,054	46,703
Nevada-California-Oregon Railway			5,983	5,753
Nevada Central Railroad	231	202	328,859	200,705
Nevada Copper Belt Railroad	1,508	232		4,242,675
Nevada Northern Railroad	34,016	90,006	3,717,011	9,558
Pioche Pacific Railroad		2,598		
San Pedro, Los Angeles and Salt Lake Railroad	36,242	41,226	3,322,352	3,401,482
Silver Peak Railroad	410	267	2,307	3,834
Southern Pacific Company	483,731	552,249	20,515,403	20,338,210
Tonopah and Goldfield Railroad	2,362	2,990	313,138	305,430
Tonopah and Tidewater Railroad	6,692	6,899	68,687	77,543
Virginia and Truckee Railroad	2,143	424	124,786	119,780
Western Pacific Railway	17,402	15,547	1,215,275	1,199,940
Totals	766,869	866,974	51,213,175	51,916,632

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

**TAXES ON REAL AND PERSONAL PROPERTY OF RAILROADS OPERATING IN NEVADA, CALIFORNIA,
UTAH, AND OREGON**
COVERING PROPERTY USED IN OPERATION ONLY

Company	Nevada		California		Utah		Oregon	
	1913	1914	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$708.94	\$1,089.08	\$48,876.54	\$54,188.40	\$3.83	\$3.94	\$5.34	\$2.78
Burlingame-Goldfield Railroad.....	7,999.10	8,867.92						
Central Pacific Railroad.....	476,316.61		51,948.41		131,665.30		31,716.08	
Eagle Salt Works Railroad.....	120.00	123.90						
Eureka-Nevada Railway.....	1,108.58	2,210.54						
Goldfield Consolidated M. & T. Co.....	4,985.25	10,186.86						
Las Vegas and Tonopah Railroad.....	16,494.70	19,682.25		.16				
Nevada-California-Oregon Railway.....	4,806.00	4,211.97	243.76					
Nevada Central Railroad.....	2,086.50	4,200.20					767.09	1,845.87
Nevada Copper Belt Railroad.....	8,887.08	4,986.26						
Nevada Northern Railway.....	68,886.86	78,886.18						
Phoenix Pacific Railroad.....		820.40				50.00		
San Pedro, Los Angeles and Salt Lake Railroad.....	92,600.98	189,871.97	30,991.05	13,707.61	168,544.00	191,147.25		
Silver Peak Railroad.....	776.41	834.88						
Southern Pacific Company.....		539,969.68	32,329.63	301,797.67	50.00	179,656.32		688,787.40
Tonopah and Goldfield Railroad.....	27,120.98	28,142.81		2.11				
Tonopah and Tidewater Railroad.....	3,158.79	4,088.07	294.49	281.49				
Virginia and Truckee Railroad.....	92,249.78	90,245.22						
Western Pacific Railway.....	116,804.57	165,291.59	35,837.53	35,572.84	97,284.64	54,082.08		
Totals	\$849,503.04	\$1,009,864.68	\$200,520.98	\$405,550.28	\$332,497.77	\$424,789.54	\$32,468.46	\$640,135.50

*Taxes for Central Pacific Railway for the year 1914 paid by Southern Pacific Company.

†Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TOTAL TAXES PAID IN VARIOUS STATES

Company	Nevada		California		Utah	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway.....	\$708.94	\$1,069.03	\$767,689.36	\$1,000,942.90	\$3.88	\$3.94
Bullfrog-Goldfield Railroad.....	7,199.10	8,307.92	1,018,889.28		137,069.68	
Central Pacific Railway.....	568,192.86					
Enterprise and Winnemucca.....	123.60					
Enterprise Nevada Railroad.....	2,270.54					
Goldfield Consolidated M. & T. Co.....	1,103.95					
Las Vegas and Tonopah Railroad.....	4,496.25					
Nevada-California-Oregon Railroad.....	16,494.70					
Nevada Central Railroad.....	4,494.10		245.10	255.16	50.00	50.00
Nevada Northern Railroad.....	3,892.35		12,723.50	14,735.75		
Nevada Northern Railroad.....	5,437.09					
Pioche Pacific Railroad.....	68,886.86					
San Pedro, Los Angeles and Salt Lake Railroad.....	92,600.98		175,401.31	194,960.37	163,594.00	191,197.20
Silver Peak Railroad.....	776.41					
Southern Pacific Company.....		529,269.63	32,359.63	3,253,131.73	50.00	179,706.3
Tonopah and Goldfield Railroad.....	27,120.98			2.11		
Tonopah and Tidewater Railroad.....	3,589.79		10,723.49	13,211.19		
Virginia and Truckee Railroad.....	20,249.78					
Western Pacific Railway.....	115,804.57	156,291.59	124,624.88	167,960.30	37,666.68	55,007.51
Totals	\$941,963.49	\$1,010,179.68	\$2,142,016.97	\$4,650,159.57	\$339,424.19	\$426,015.02

*Taxes for Central Pacific Railway for the year 1914 paid by Southern Pacific Company.

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TOTAL TAXES PAID IN VARIOUS STATES

Company	Oregon		Various		Total taxes paid	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$5.34	\$2.73	\$3,299,124.43	\$3,771,432.27	\$4,067,431.90	\$4,773,440.87
Bullfrog-Goldfield Railroad					7,369.10	8,307.92
Central Pacific Railway ^a	31,716.08		56,504.83		1,812,822.78	
Eagle Salt Works Railway					120.00	
Eureka-Nevada Railway ^b					1,103.85	2,210.64
Goldfield Consolidated M. & T. Co.			23,659.57	12,526.64	28,644.82	22,722.20
Las Vegas and Tonopah Railroad					15,719.70	19,967.41
Nevada-California-Oregon Railway		1,445.37	825.73	475.00	18,841.32	20,987.69
Nevada Central Railroad	867.09			33.25	3,698.35	4,633.45
Nevada Copper Belt Railroad				333.15	5,437.09	7,327.71
Nevada Northern Railway			7,462.68	7,354.16	77,349.64	81,242.23
Pioche Pacific Railroad						370.40
San Pedro, Los Angeles and Salt Lake Railroad			6,000.00	6,662.29	457,596.17	532,454.18
Silver Peak Railroad					776.41	
Southern Pacific Company		639,087.40	154,143.49	1,084,422.19	186,523.12	5,640,617.33
Tonopah and Goldfield Railroad			625.00	2,799.58	27,746.50	30,944.00
Tonopah and Tidewater Railroad			1,170.14	1,369.93	15,482.42	18,679.19
Virginia and Truckee Railway			760.41	752.75	21,010.19	20,997.97
Western Pacific Railway					278,096.13	379,259.40
Totals	\$32,588.46	\$640,535.50	\$3,550,276.28	\$4,838,161.21	\$7,005,289.39	\$11,565,050.98

^aTaxes for Central Pacific Railway for the year 1914 paid by Southern Pacific Company.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TAXES PAID IN VARIOUS STATES

Railroad and State	1913	1914	Railroad and State	1913	1914
ATCHISON, TOPEKA AND SANTA FE RAILWAY— Illinois.....	\$190,590.50	\$247,885.08	NEVADA COPPER BELT RAILROAD— United States Government.....		\$333.15
Iowa.....	22,082.96	25,888.16	NEVADA NORTHERN RAILWAY— United States Government.....	\$7,237.68	7,229.16
Missouri.....	119,966.58	124,843.61	Maline.....	125.00	125.00
Kansas.....	1,201,316.94	1,259,067.21			
Oklahoma.....	491,913.56	532,331.72			
Nebraska.....	294.20	310.62			
Colorado.....	193,139.58	213,756.55	SAN PEDRO, LOS ANGELES AND SALT LAKE RAILROAD— United States Government.....	6,000.00	6,662.29
New Mexico.....	473,633.03	705,738.03			
Arizona.....	376,073.91	451,668.77			
New York.....	188.69	196.89	SOUTHERN PACIFIC COMPANY— Louisiana.....		185.00
Georgia.....	2.42	3.60	Arizona.....		350,039.37
Ohio.....	2.19	3.23	Kentucky.....	84,350.00	190,163.81
Michigan.....	15.62	11.33	Illinois.....	20.64	20.64
Canada.....	61.67	45.86	New Mexico.....		112,467.00
United States Government.....	229,847.55	209,692.41	New York.....	1,840.36	
			United States Government.....	67,963.13	381,546.37
CENTRAL PACIFIC RAILWAY*— Idaho.....	5.74				
United States Government.....	56,499.09		TONOPAH AND GOLDFIELD RAILROAD— Pennsylvania.....	625.00	2,799.58
			United States Government.....		
GOLDFIELD CONSOLIDATED M. & T. Co.— United States Government.....	23,659.57	12,636.64			
NEVADA-CALIFORNIA-OREGON RAILWAY— United States Government.....	825.73	475.00	TONOPAH AND TIDEWATER RAILROAD— New Jersey.....	1,000.00	1,000.00
			United States Government.....	1,170.14	369.93
NEVADA CENTRAL RAILROAD— United States Government.....		33.25			
			VIRGINIA AND TRUCKEE RAILWAY— United States Government.....	520.41	512.75
			City of Reno.....	240.00	240.00

*Taxes for Central Pacific Railway for the year 1914 paid by Southern Pacific Company.

CONSUMPTION OF FUEL BY LOCOMOTIVES

Company	Coal—Tons		Fuel oil—Gallons		Total fuel consumed—Tons	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway ^a	2,396,464	2,342,854	202,916,168	161,542,290	3,708,175	3,388,240
Burlington Railroad			334,880	332,927	2,969	2,823
Central Pacific Railroad	32	31			32	31
Eastern Pacific Railroad	501	487			508	487
Eagle Salt Works Railroad			46	571	46	571
Elgin, Nevada Railroad			157,438	128,085	611	498
Goldfield Consolidated M. & T. Co.			998,560	947,995	5,408	5,408
Las Vegas and Tonopah Railroad			1,636,262	1,456,089	9,687	8,687
Nevada-California-Oregon Railway					717	534
Nevada Central Railroad	717	534			2,171	1,410
Nevada Copper Belt Railroad			560,393	536,861	2,171	1,410
Nevada Northern Railroad	36,889	45,398	408,898	82,604	38,558	45,771
Pioche Pacific Railroad						156
San Pedro, Los Angeles and Salt Lake Railroad			50,898,693	54,232,947	398,092	433,775
Silver Peak Railroad	95,114	110,603	10,872	9,900	143	117
Southern Pacific Company ^b	22		463,055,017	455,100,736	2,827,856	2,708,883
Tonopah and Goldfield Railroad	70,994	1,430	1,698,089	1,486,180	10,245	10,110
Tonopah and Tidewater Railroad			819,240	1,987,976	6,553	7,804
Virginia and Truckee Railroad			7758,995	5702,611	5,960	5,960
Western Pacific Railway	77,588	45,342	33,309,340	35,576,814	299,905	287,109
Totals	2,678,271	2,546,855	756,346,133	677,381,604	7,282,189	6,876,850

^aWood, cords: 1913, 5,199; 1914, 4,681.^bFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.^cGasoline.^dIncludes 14,342 gallons of gasoline.^eWood, cords: 1913, 166; 1914, 169.^fIncludes 8,698 gallons of gasoline.^gIncludes 8,447 gallons of gasoline.

OFFICERS OF RAILROAD COMPANIES OPERATING IN NEVADA**Atchison, Topeka and Santa Fe Railway Company**

Directors—E. P. Ripley, Chicago, Ill.; H. S. Pritchett, Charles Steele, H. R. Duval, T. P. Fowler, W. D. Hines, E. J. Berwind, J. G. McCullough, A. D. Juilliard, all of New York, N. Y.; Howell Jones and C. S. Glead of Topeka, Kansas; H. C. Frick, Pittsburg, Pa.; A. C. Jobes, Merriam, Kans.; B. P. Cheney, Boston, Mass.; T. D. Cuyler, Philadelphia, Pa.

Principal Officers—President, E. P. Ripley, Chicago, Ill.; Vice-President, W. B. Storey, Chicago, Ill.; Vice-President, Edward Chambers, Chicago, Ill.; Vice-President, W. E. Hodges, Chicago, Ill.; Secretary and Treasurer, E. L. Copeland, Topeka, Kans.; Assistant Secretary and Treasurer, G. Holterhoff, Jr., Los Angeles, Cal.; General Counsel, Walker D. Hines, New York, N. Y.; General Solicitor, Gardiner Lathrop, Chicago, Ill.; Comptroller, D. L. Gallup, New York, N. Y.; Deputy Comptroller, A. E. Waterhouse, New York, N. Y.; General Auditor, W. E. Bailey, Chicago, Ill.; Assistant General Auditor, J. E. Baxter, Chicago, Ill.; Assistant General Auditor, A. L. Conrad, Chicago, Ill.; General Manager Eastern Lines, C. W. Kouns, Topeka, Kans.; General Manager Western Lines, F. C. Fox, Amarillo, Tex.; General Manager Coast Lines, A. G. Wells, Los Angeles, Cal.; General Manager S. F. P. & P. Lines, W. A. Drake, Prescott, Ariz.; Chief Engineer System, C. F. W. Felt, Chicago, Ill.; General Superintendent, R. J. Parker, Topeka, Kans.; General Superintendent, E. Raymond, Newton, Kans.; Acting General Superintendent, C. H. Bristol, La Junta, Colo.; General Superintendent, G. C. Starkweather, Amarillo, Tex.; General Superintendent, I. L. Hibbard, Los Angeles, Cal.; Freight Traffic Manager, F. B. Houghton, Chicago, Ill.; Passenger Traffic Manager, W. J. Black, Chicago, Ill.; General Freight Agent, J. B. Koontz, Topeka, Kans.; General Freight Agent, H. P. Anewalt, Los Angeles, Cal.; General Passenger Agent, J. M. Connell, Topeka, Kans.; Land Commissioner, Howell Jones, Topeka, Kans.

Bullfrog-Goldfield Railroad Company

Directors—C. B. Zabriskie, New York, N. Y.; W. Hinckle Smith, Philadelphia, Pa.; Henry W. Biddle, Philadelphia, Pa.; Rudolph Ellis, Philadelphia, Pa.; Clinton A. Higbee, Philadelphia, Pa.; DeWitt Van Buskirk, Bayonne, N. J.

Principal Officers—President, C. B. Zabriskie, New York, N. Y.; Vice-President, W. Hinckle Smith, Philadelphia, Pa.; Treasurer, Clyde A. Heller, Philadelphia, Pa.; Auditor, B. W. Fernald, Oakland, Cal.; General Superintendent, John Ryan, Stagg, Cal.; Traffic Manager, W. R. Alberger, Oakland, Cal.; General Freight Agent, F. M. Jenifer, Oakland, Cal.

Central Pacific Railway Company

Directors—Wm. Sproule, San Francisco, Cal.; T. O. Edwards, San Francisco, Cal.; Wm. F. Herrin, San Francisco, Cal.; Wm. Hood, San Francisco, Cal.; G. L. King, San Francisco, Cal.; T. F. Rowlands, Ogden, Utah; E. O. McCormick, San Francisco, Cal.; C. H. Redington, San Francisco, Cal.; W. R. Scott, San Francisco, Cal.

Principal Officers—President, Wm. F. Herrin, San Francisco, Cal.; Vice-President, W. R. Scott, San Francisco, Cal.; Vice-President, E. O. McCormick, San Francisco, Cal.; Second Vice-President, A. D. McDonald, New York, N. Y.; Third Vice-President, C. H. Redington, San Francisco, Cal.; Secretary, G. L.

King, San Francisco, Cal.; Treasurer, A. K. Van Deventer, New York, N. Y.; Chief Counsel, Wm. F. Herrin, San Francisco, Cal.; Comptroller, A. D. McDonald, New York, N. Y.; Auditor, T. O. Edwards, San Francisco, Cal.; Chief Engineer, Wm. Hood, San Francisco, Cal.; Land Commissioner, B. A. McAllaster, San Francisco, Cal.

Eagle Salt Works Railroad Company

Directors—C. R. Lewers, San Francisco, Cal.; J. M. Fulton, Reno, Nevada; G. L. King, San Francisco, Cal.; E. Hickman, San Francisco, Cal.; E. H. Miller, San Francisco, Cal.

Principal Officers—President, E. H. Miller, San Francisco, Cal.; Vice-President, E. Hickman, San Francisco, Cal.; Secretary, G. L. King, San Francisco, Cal.; Treasurer, H. A. Jones, San Francisco, Cal.; Auditor, T. O. Edwards, San Francisco, Cal.

Goldfield Consolidated Milling and Transportation Company

Directors—Geo. Wingfield, Reno, Nevada; J. D. Hubbard, Chicago, Ill.; J. H. Carstairs, Philadelphia, Pa.; A. H. Howe, Goldfield, Nevada; Albert Burch, Goldfield, Nevada; Henry M. Hoyt, Reno, Nevada.

Principal Officers—President, Geo. Wingfield, Reno, Nevada; Second Vice-President, W. E. Zoebel, Goldfield, Nevada; Secretary and Treasurer, A. H. Howe, Goldfield, Nevada; General Counsel, Henry M. Hoyt, Reno, Nevada; General Manager, Albert Burch, Goldfield, Nevada; General Freight Agent, R. J. Davey, Goldfield, Nevada.

Las Vegas and Tonopah Railroad Company

Directors—W. A. Clark, Butte, Mont.; J. Ross Clark, Los Angeles, Cal.; W. A. Clark, Jr., Los Angeles, Cal.; C. O. Whittemore, Los Angeles, Cal.; H. C. Lee, Los Angeles, Cal.; W. H. Comstock, Los Angeles, Cal.; David Keith, Salt Lake City, Utah.

Principal Officers—President, J. Ross Clark, Los Angeles, Cal.; Vice-President, C. O. Whittemore, Los Angeles, Cal.; Secretary and Treasurer, W. H. Comstock, Los Angeles, Cal.; General Counsel, C. O. Whittemore, Los Angeles, Cal.; Auditor, J. Q. Goss, Jr., Los Angeles, Cal.; Chief Engineer, Arthur Maguire, Los Angeles, Cal.; Superintendent, C. E. M. Beall, Las Vegas, Nevada; Traffic Manager, C. E. Redman, Goldfield, Nevada.

Nevada-California-Oregon Railway

Directors—A. D. Moran, New York, N. Y.; Chas. Moran, New York, N. Y.; C. Hamilton, Waco, Tex.; R. P. Dunbar, Reno, Nevada; H. V. McNamara, Reno, Nevada.

Principal Officers—President, Chas. Moran, New York, N. Y.; Vice-President, C. Hamilton, Waco, Tex.; Secretary and Auditor, R. P. Dunbar, Reno, Nevada; Treasurer, A. D. Moran, New York, N. Y.; General Counsel, Jas. Glynn and A. A. Heer, Reno, Nevada; General Manager, R. M. Cox, Reno, Nevada; Traffic Manager, H. V. McNamara, Reno, Nevada.

Nevada Central Railroad Company

Directors—J. G. Phelps Stokes, New York, N. Y.; I. N. Phelps Stokes, New York, N. Y.; Timothy Davenport, New York, N. Y.; J. W. McCulloch, New York, N. Y.; Daniel J. Shea, Austin, Nevada; Henry W. Dyer, Austin, Nevada; John M. Hiskey, Austin, Nevada.

Principal Officers—President, J. G. Phelps Stokes, New York, N. Y.; Vice-President, Timothy Davenport, New York, N. Y.; Secretary and Treasurer,

J. M. Hiskey, Austin, Nevada; Auditor, J. M. Hiskey, Austin, Nevada; General Manager and Assistant Treasurer, Jas. W. McCulloch, New York, N. Y.; General Superintendent, J. M. Hiskey, Austin, Nevada.

Nevada Copper Belt Railroad Company

Directors—W. C. Orem, Salt Lake City, Utah; James G. Berryhill, Des Moines, Iowa; A. J. Orem, Boston, Mass.; James G. Berryhill, Jr., Des Moines, Iowa; T. W. Boyer, Salt Lake City, Utah; J. J. Corum, Los Angeles, Cal.; W. H. Wattis, Ogden, Utah; F. M. Orem, Salt Lake City, Utah.

Principal Officers—President, W. C. Orem, Salt Lake City, Utah; First Vice-President, James G. Berryhill, Des Moines, Iowa; Second Vice-President, A. J. Orem, Boston, Mass.; Secretary and Treasurer, F. M. Orem, Salt Lake City, Utah; General Counsel, Henry I. Moore, Salt Lake City, Utah; Auditor, C. A. Chapman, Salt Lake City, Utah; General Manager, W. C. Orem, Salt Lake City, Utah; General Superintendent, Archie J. Orem, Ludwig, Nevada; Traffic Manager, F. J. Sullivan, Mason, Nevada.

Nevada Northern Railway Company

Directors—S. W. Eccles, Murray Guggenheim, W. E. Bennett, F. W. Hills, E. L. Newhouse, Simon Guggenheim, all of New York, N. Y.; W. H. Smith, Philadelphia, Pa.; Charles Hayden, Boston, Mass.; D. C. Jackling, Salt Lake City, Utah; C. M. MacNeill, Colorado Springs, Colo.

Principal Officers—President, S. W. Eccles, New York, N. Y.; First Vice-President, D. C. Jackling, Salt Lake City, Utah; Second Vice-President, W. E. Bennett, New York, N. Y.; Secretary, W. E. Bennett, New York, N. Y.; Treasurer, C. K. Lipman, New York, N. Y.; General Solicitor, C. H. Lindley, San Francisco, Cal.; Comptroller, F. W. Hills, New York, N. Y.; Auditor, Frank Roper, East Ely, Nevada; Vice-President and General Manager, L. G. Cannon, East Ely, Nevada; Chief Engineer, C. W. Backo, East Ely, Nevada.

Nevada Short Line Railway Company

Directors—A. A. Codd, R. F. Meeks, F. M. Manson, R. M. Price, all of Reno, Nevada; Roger D. Matthews, Oreana, Nevada.

Principal Officers—President, A. A. Codd, Reno, Nevada; First Vice-President and Treasurer, Roger D. Matthews, Oreana, Nevada; Secretary and Auditor, R. F. Meeks; General Counsel, R. M. Price; General Manager, A. A. Codd; Chief Engineer, Wm. A. Simpkins, all of Reno, Nevada; General Superintendent, R. E. Dillree; Traffic Manager, Elbert L. Turnbaugh, both of Oreana, Nevada.

Nevada Transportation Company

(Operating Eureka-Nevada Railway)

Directors—F. C. Sykes, San Francisco, Cal.; J. E. Green, Palo Alto, Cal.; G. A. Nichols, San Francisco, Cal.; E. G. Fischer, San Francisco, Cal.; B. Brooks, San Francisco, Cal.

Principal Officers—President, F. C. Sykes, San Francisco, Cal.; Vice-President, G. C. Chadwick, San Francisco, Cal.; Secretary, L. H. Clar, San Francisco, Cal.; Treasurer, Geo. Whittell, San Francisco, Cal.; Assistant Secretary, B. Brooks, San Francisco, Cal.; Auditor, W. E. Runner, Palisade, Nevada; General Manager, J. E. Sexton, Palisade, Nevada.

Pioche Pacific Railroad Company

Directors—E. B. Critchlow, G. A. Marr, G. A. Critchlow, W. W. Armstrong, W. J. Barrette, all of Salt Lake City, Utah.

Principal Officers—President, G. A. Marr; First Vice-President and Secretary, E. B. Critchlow; Treasurer, W. W. Armstrong, all of Salt Lake City, Utah; General Manager and Superintendent, H. R. Van Wagenen, Pioche, Nevada.

San Pedro, Los Angeles and Salt Lake Railroad Company

Directors—W. A. Clark, Butte, Montana; R. S. Lovett, New York, N. Y.; E. E. Calvin, Thos. Kearns, and W. H. Bancroft, of Salt Lake City, Utah; B. C. Kerens, St. Louis, Mo.; J. Ross Clark, J. F. Sartori, Oscar Lawler, W. G. Kerchoff, T. F. Miller, and W. H. Comstock, of Los Angeles, Cal.

Principal Officers—President, W. A. Clark, New York, N. Y.; First Vice-President, W. H. Bancroft, Salt Lake City, Utah; Second Vice-President, J. Ross Clark, Los Angeles, Cal.; Secretary, W. H. Comstock, Los Angeles, Cal.; Treasurer, W. H. Leete, Los Angeles, Cal.; General Counsel, A. S. Halstead, Los Angeles, Cal.; Auditor, C. C. Barry, Los Angeles, Cal.; General Manager, H. C. Nutt, Los Angeles, Cal.; Chief Engineer, Arthur Maguire, Los Angeles, Cal.; Traffic Manager, F. A. Wann, Los Angeles, Cal.; General Freight Agent, T. M. Sloan, Los Angeles, Cal.; General Passenger Agent, T. C. Peck, Los Angeles, Cal.

Silver Peak Railroad Company

Directors—Geo. T. Oliver, Pittsburg, Pa.; Wm. Flinn, Pittsburg, Pa.; Wm. A. Bradley, Blair, Nevada; B. A. Rives, Blair, Nevada; S. H. Fine, Blair, Nevada.

Principal Officers—President, Geo. T. Oliver, Pittsburg, Pa.; First Vice-President, Wm. A. Bradley, Blair, Nevada; Secretary and Treasurer, B. A. Rives, Blair, Nevada; Auditor, W. C. Leach, Blair, Nevada; General Manager, Wm. A. Bradley, Blair, Nevada; General Freight and Passenger Agent, B. A. Rives, Blair, Nevada.

Southern Pacific Company

Directors—C. N. Bliss, New York, N. Y.; W. P. Bliss, New York, N. Y.; Henry W. de Forest, New York, N. Y.; Robert Goelet, Newport, R. I.; J. H. Harding, New York, N. Y.; Chas. W. Harkness, New York, N. Y.; H. E. Huntington, New York, N. Y.; J. N. Jarvis, New York, N. Y.; J. Kruttschnitt, New York, N. Y.; L. F. Loree, New York, N. Y.; Ogden Mills, Staatsburg, N. Y.; Lewis J. Spence, New York, N. Y.; Wm. Sproule, San Francisco, Cal.; E. P. Swenson, New York, N. Y.; J. N. Wallace, New York, N. Y.

Principal Officers—Chairman of the Executive Committee, J. Kruttschnitt, New York, N. Y.; President, Wm. Sproule, San Francisco, Cal.; Vice-President, Wm. F. Herrin, San Francisco, Cal.; Vice-President, A. D. McDonald, New York, N. Y.; Vice-President, W. A. Worthington, New York, N. Y.; Vice-President, W. R. Scott, San Francisco, Cal.; Vice-President, E. O. McCormick, San Francisco, Cal.; Secretary, Hugh Neill, New York, N. Y.; Treasurer, A. K. Van Deventer, New York, N. Y.; Chief Counsel, Wm. F. Herrin, San Francisco, Cal.; General Counsel, J. P. Blair, New York, N. Y.; Controller, A. D. McDonald, New York, N. Y.; Assistant Controller, H. B. Johnson, New York, N. Y.; Assistant Controller, C. W. Mulks, New York, N. Y.; Auditor, T. O. Edwards, San Francisco, Cal.; Assistant Director of Maintenance and Operation, W. A. Worthington, New York, N. Y.; Chief Engineer, Wm. Hood, San Francisco, Cal.; General Manager, W. R. Scott, San Francisco, Cal.; Freight Traffic Manager, G. W. Luce, San Francisco, Cal.; Director of Traffic, Lewis J. Spence, New York, N. Y.; General Freight Agent, C. J. Jones, San Francisco, Cal.; General Passenger Agent, Jas. Horsburgh, Jr., San Francisco, Cal.; Land Commissioner, B. A. McAllaster, San Francisco, Cal.

Tonopah and Goldfield Railroad Company

Directors—Jas. S. Austin, Philadelphia, Pa.; Samuel Bell, Jr., Philadelphia, Pa.; M. B. Cutter, Philadelphia, Pa.; C. A. Daniel, Philadelphia, Pa.; C. A. Higbee, Philadelphia, Pa.; Clyde A. Heller, Philadelphia, Pa.; Chas. E. Knox, Philadelphia, Pa.; Chas. R. Miller, Philadelphia, Pa.; Henry D. Moore, Philadelphia, Pa.; Richard G. Park, Westchester, Pa.; Wm. M. Potts, Wyebrooke, Pa.; J. Harvey Whiteman, Wilmington, Del.; Geo. Wingfield, Reno, Nevada.

Principal Officers—President, M. B. Cutter, Philadelphia, Pa.; First Vice-President, Jas. S. Austin, Philadelphia, Pa.; Second Vice-President, C. A. Higbee, Philadelphia, Pa.; Secretary, Wm. F. Henshaw, Philadelphia, Pa.; Treasurer, C. A. Higbee, Philadelphia, Pa.; General Solicitor, J. Harvey Whiteman, Wilmington, Del.; General Counsel, Hugh H. Brown, Tonopah, Nevada; Assistant Treasurer, T. A. Frazier, Tonopah, Nevada; Auditor, R. S. Titlow, Goldfield, Nevada; Chief Engineer, R. W. Cattermole, Goldfield, Nevada; Traffic Manager and Superintendent, W. D. Forster, Goldfield, Nevada.

Tonopah and Tidewater Railroad Company

Directors—F. M. Smith, Oakland, Cal.; C. B. Zabriskie, New York, N. Y.; DeWitt Van Buskirk, Bayonne, N. J.; J. A. Middleton, New York, N. Y.; J. W. Hardenbergh, Jersey City, N. J.; Geo. Carragan, Bayonne, N. J.; Chas. S. Noe, Bayonne, N. J.

Principal Officers—President, F. M. Smith, Oakland, Cal.; Vice-President, DeWitt Van Buskirk, New York, N. Y.; Secretary and Treasurer, C. B. Zabriskie, New York, N. Y.; General Solicitor, DeWitt Van Buskirk, New York, N. Y.; Attorney, Walter D. Cole, Oakland, Cal.; Auditor, B. W. Fernald, Oakland, Cal.; General Manager, John Ryan, Stagg, Cal.; Superintendent, W. W. Cahill, Stagg, Cal.; Traffic Manager, W. R. Alberger, Oakland, Cal.; General Freight and Passenger Agent, F. M. Jenifer, Oakland, Cal.

Virginia and Truckee Railway

Directors—Ogden Mills, New York, N. Y.; A. M. Ardery, Carson City, Nevada; E. B. Yerington, Carson City, Nevada; Geo. T. Mills, Carson City, Nevada; W. E. Sharon, Virginia City, Nevada; J. W. Eckley, Virginia City, Nevada; W. E. F. Deal, Virginia City, Nevada; Jas. Newlands, Jr., San Francisco, Cal.; H. L. Griffiths, Carson City, Nevada.

Principal Officers—President, Ogden Mills, New York, N. Y.; First Vice-President, A. M. Ardery, Carson City, Nevada; Secretary, E. B. Yerington, Carson City, Nevada; Treasurer, Agency Bank of California, Virginia City, Nevada; Auditor, E. B. Yerington, Carson City, Nevada; General Manager, A. M. Ardery, Carson City, Nevada; Chief Engineer, W. H. Kirk, Carson City, Nevada; General Freight and Passenger Agent, E. B. Yerington, Carson City, Nevada.

Western Pacific Railway Company

Directors—E. T. Jeffery, New York, N. Y.; B. F. Bush, St. Louis, Mo.; Geo. J. Gould, Kingston Gould, Edgar L. Marston, F. W. M. Cutcheon, all of New York, N. Y.; E. L. Brown, C. M. Levey, Warren Olney, Warren Olney, Jr., C. W. Slack, Charles Elsey, J. F. Evans, all of San Francisco, Cal.

Principal Officers—Chairman of the Board, E. T. Jeffery, New York, N. Y.; President, B. F. Bush, St. Louis, Mo.; First Vice-President, E. L. Brown, San Francisco, Cal.; Vice-President, C. M. Levey, San Francisco, Cal.; Vice-President—Traffic, J. M. Johnson, St. Louis, Mo.; Secretary, W. G. Brunn, San

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**TABULATED FIGURES DRAWN FROM MONTHLY REPORTS OF
RAILROADS OPERATING IN NEVADA, SHOWING NEVADA
INTRASTATE EARNINGS (GROSS), BY MONTHS, FOR THE
YEARS ENDING JUNE 30, 1913 AND 1914.**

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MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	July		August		September	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$175.44	\$272.17	\$318.41	\$286.97	\$769.51	\$294.78
Bullfrog-Goldfield Railroad	1,742.27	940.49	1,483.99	1,886.96	1,980.76	1,587.28
Eureka-Nevada Railway ^a	7,763.33	6,998.76	7,964.94	8,143.76	7,572.71	7,080.76
Goldfield Consolidated M. & T. Co.	962.40	2,378.61	1,640.26	2,686.37	1,866.66	2,207.80
Las Vegas and Tonopah Railroad	3,114.47	3,046.73	2,681.57	2,238.01	2,728.30	2,807.02
Nevada-California-Oregon Railway	260.69	376.96	240.38	228.01	448.22	321.72
Nevada Central Railroad	18,112.83	9,480.73	12,976.01	9,068.20	13,823.55	8,613.35
Nevada Copper Belt Railroad	80,694.21	76,566.25	86,776.09	86,600.47	76,800.11	79,122.17
Nevada Northern Railway	96.53	1,673.89	1,523.07	1,866.62	660.28	1,068.96
San Pedro, Los Angeles and Salt Lake Railroad	95.53	286.96	89.76	210.88	80.22	181.87
Silver Peak Railroad	19,501.31	19,813.62	21,061.62	21,761.67	23,004.35	19,869.35
Southern Pacific Company	20,823.18	20,860.66	19,568.56	21,683.75	18,371.37	20,963.14
Tonopah and Goldfield Railroad	19.46	79.64	83.88	88.60	36.71	60.89
Tonopah and Tidewater Railroad	4,666.56	4,737.34	5,163.32	4,738.28	4,911.30	4,206.13
Virginia and Truckee Railroad	566.92	1,062.40	969.94	924.92	1,216.87	962.24
Western Pacific Railroad						
Totals	\$159,840.57	\$147,834.80	\$161,306.78	\$161,967.10	\$153,737.81	\$149,313.46

Company	October		November		December	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$469.02	\$296.14	\$277.08	\$390.66	\$330.53	\$299.22
Bullfrog-Goldfield Railroad	2,423.54	1,171.23	2,618.86	1,168.96	886.28	1,230.96
Eureka-Nevada Railway ^a	7,913.90	7,849.26	7,204.75	7,417.76	7,265.59	7,340.00
Goldfield Consolidated M. & T. Co.	1,604.68	3,282.19	1,540.07	1,880.64	1,976.03	1,306.87
Las Vegas and Tonopah Railroad	3,549.60	8,796.55	2,616.75	2,686.26	1,776.66	1,074.86
Nevada-California-Oregon Railway	363.02	890.62	381.14	270.73	286.28	209.10
Nevada Central Railroad	17,514.27	8,734.08	16,860.36	13,291.06	15,323.89	10,025.96
Nevada Copper Belt Railroad	14,624.23	88,206.79	67,797.29	79,909.19	68,416.43	86,673.72
Nevada Northern Railway	871.14	1,406.60	1,276.31	699.21	776.88	209.10
San Pedro, Los Angeles and Salt Lake Railroad	385.96	199.69	74.26	123.96	95.62	585.54
Silver Peak Railroad	27,686.04	20,686.62	24,726.44	25,968.21	20,407.56	25,762.04
Southern Pacific Company	21,956.01	21,180.61	20,867.62	20,439.61	19,701.30	16,921.08
Tonopah and Goldfield Railroad	36.21	83.27	16.74	78.17	89.93	27.60
Tonopah and Tidewater Railroad	7,819.93	6,704.89	7,742.14	7,997.69	5,404.49	4,046.90
Virginia and Truckee Railroad	1,812.62	1,250.87	2,644.57	2,586.82	1,067.79	1,411.16
Western Pacific Railroad						
Totals	\$106,291.17	\$174,217.10	\$156,633.38	\$161,817.29	\$143,766.65	\$157,185.41

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	January		February		March	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrogs-Goldfield Railroad	\$246.61	\$294.61	\$262.48	\$117.02	\$216.87	\$119.33
Eureka-Nevada Railway ^a	801.24	723.21	476.02	521.71	836.95	992.83
Goldfield Consolidated M. & T. Co.	6,714.83	7,787.25	6,543.05	6,914.75	7,215.27	7,888.50
Las Vegas and Tonopah Railroad	1,749.28	1,806.50	1,641.80	1,351.72	1,903.64	2,227.01
Nevada-California-Oregon Railroad	1,062.97	579.62	1,126.63	1,053.89	1,298.01	1,598.86
Nevada Central Railroad	127.78	534.97	207.17	184.48	312.64	406.34
Nevada Copper Belt Railroad	16,384.99	6,845.09	11,830.29	5,797.47	14,894.55	6,994.83
Nevada Northern Railroad	68,573.18	78,899.68	73,796.58	69,105.83	86,494.41	89,449.11
San Pedro, Los Angeles and Salt Lake Railroad	597.68	804.51	475.12	1,492.47	680.21	3,219.35
Silver Peak Railroad	93.05	292.51	217.79	254.76	121.27	318.32
Southern Pacific Company	18,643.05	13,501.76	19,212.57	19,800.94	18,833.49	20,035.73
Tonopah and Goldfield Railroad	18,508.39	17,996.90	18,806.80	17,755.35	19,008.67	18,265.62
Tonopah and Tidewater Railroad	30.24	38.66	33.43	9.90	35.76	21.71
Virginia and Truckee Railway	4,093.49	2,841.57	3,911.44	3,407.34	7,620.50	4,594.11
Western Pacific Railway	683.38	1,176.43	582.15	639.27	1,206.12	1,153.91
Totals	\$138,310.17	\$134,125.29	\$139,123.32	\$128,406.83	\$160,528.36	\$157,275.76
Company	April		May		June	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrogs-Goldfield Railroad	\$288.24	\$294.34	\$253.71	\$247.65	\$235.60	\$130.85
Eureka-Nevada Railway ^a	1,721.24	1,702.52	869.41	547.43	237.57	575.53
Goldfield Consolidated M. & T. Co.	6,539.86	7,275.50	7,158.43	7,741.25	7,466.61	6,695.25
Las Vegas and Tonopah Railroad	1,646.39	2,253.50	1,124.09	3,625.94	921.33	2,611.39
Nevada-California-Oregon Railroad	1,962.27	1,888.05	1,703.33	1,585.85	2,146.77	2,473.81
Nevada Central Railroad	338.13	520.53	232.07	336.32	268.76	263.10
Nevada Copper Belt Railroad	14,036.25	4,792.93	15,987.99	8,754.90	14,818.51	6,227.41
Nevada Northern Railroad	75,666.98	90,507.86	84,531.57	96,614.87	80,724.68	81,966.85
San Pedro, Los Angeles and Salt Lake Railroad	785.24	1,575.80	457.38	1,724.56	864.70	1,702.70
Silver Peak Railroad	134.21	179.23	73.81	142.59	245.75	185.96
Southern Pacific Company	25,517.56	22,310.97	19,652.19	21,862.29	20,455.55	19,788.92
Tonopah and Goldfield Railroad	17,166.16	19,824.20	19,156.05	19,981.56	19,040.08	20,573.09
Tonopah and Tidewater Railroad	41.85	20.70	52.03	73.21	40.84	23.88
Virginia and Truckee Railway	5,850.73	3,776.25	4,964.42	4,323.73	4,593.55	3,652.85
Western Pacific Railway	1,107.62	2,551.76	1,876.54	2,779.86	981.72	1,813.15
Totals	\$152,753.03	\$149,407.14	\$158,093.02	\$160,622.01	\$153,042.62	\$148,695.33

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

MONTHLY INTRASTATE FREIGHT REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	Total for six months ending Dec. 31			Total for six months ending June 30		
	1912	1913	1914	1913	1914	1914
Atchison, Topeka and Santa Fe Railway	\$2,340.39	\$1,827.78		\$1,503.51	\$3,843.90	\$2,971.48
Burling-Goldfield Railway	11,160.69	8,045.27		4,942.43	16,108.12	13,108.70
Eureka-Nevada Railway	45,705.22	44,835.25		41,639.05	87,343.27	89,140.75
Goldfield Consolidated M. & T. Co.	8,980.00	13,640.48		8,986.53	17,966.53	27,617.04
Las Vegas and Tonopah Railroad	16,325.35	15,649.09		9,259.98	25,625.33	24,979.17
Nevada-California-Oregon Railroad	1,984.73	1,795.04		1,486.55	2,205.74	4,091.78
Nevada Central Railroad	93,600.91	59,232.81		87,952.58	181,553.49	98,645.47
Nevada Copper Belt Railroad	394,008.36	496,267.59		469,757.40	863,795.76	982,811.91
Nevada Northern Railway	741.34	7,019.32		3,760.33	9,812.80	17,539.21
San Pedro, Los Angeles and Salt Lake Railroad	136,277.31	1,171.65		1,373.36	1,627.23	2,645.01
Southern Pacific Company	121,336.03	142,870.54		122,315.01	258,592.32	260,176.25
Tonopah and Goldfield Railroad	171.92	122,064.75		111,686.15	114,378.72	236,443.47
Tonopah and Tidewater Railroad	35,212.73	373.17		234.16	406.07	566.23
Virginia and Truckee Railway	8,677.71	29,433.41		30,984.43	66,147.16	52,019.26
Western Pacific Railway		8,187.41		6,487.53	15,115.24	18,301.79
Totals	\$882,575.16	\$952,325.16		\$901,850.52	\$1,784,425.68	\$1,830,857.52

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	July			August		
	1912	1913	1914	1912	1913	1914
Atchison, Topeka and Santa Fe Railway	\$364.50	\$258.65		\$591.90	\$169.30	\$256.34
Burling-Goldfield Railway	1,057.50	843.80		1,113.86	1,107.05	1,092.45
Eureka-Nevada Railway						
Goldfield Consolidated M. & T. Co.	2,012.79	1,476.93		1,516.90	1,866.97	1,720.57
Las Vegas and Tonopah Railroad	1,952.39	1,300.22		1,777.94	1,311.07	1,236.57
Nevada-California-Oregon Railroad	2,383.80	1,227.60		2,173.70	1,523.70	1,436.85
Nevada Central Railroad	8,494.42	2,175.25		2,146.56	8,383.15	1,629.93
Nevada Copper Belt Railroad	2,421.61	9,354.39		8,340.09	6,667.93	7,983.40
Nevada Northern Railway	346.93	1,998.13		1,645.18	1,667.74	2,072.91
San Pedro, Los Angeles and Salt Lake Railroad	36,073.73	32,573.43		29,393.44	37,693.43	31,593.98
Southern Pacific Company	6,779.21	6,243.64		6,062.76	6,290.15	5,848.49
Tonopah and Goldfield Railroad	119.50	33.55		92.55	15.68	40.55
Tonopah and Tidewater Railroad	3,389.39	6,515.76		6,700.22	6,443.68	6,901.62
Virginia and Truckee Railway	2,229.41	2,487.35		2,001.85	2,061.77	2,261.56
Western Pacific Railway						
Totals	\$74,385.48	\$66,349.13		\$62,604.53	\$69,917.66	\$68,779.88

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	October		November		December	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$371.40	\$257.36	\$331.70	\$311.06	\$378.00	\$360.50
Eureka-Nevada Railway ^a	1,324.60	1,149.00	1,340.45	1,100.45	1,146.70	1,200.60
Goldfield Consolidated M. & T. Co.		1,584.44	1,866.54	1,537.20	1,923.35	1,618.17
Las Vegas and Tonopah Railroad	1,660.15	1,252.36	1,221.86	1,068.10	1,081.04	1,076.14
Nevada-California-Oregon Railroad	1,886.16	1,188.96	1,063.86	1,790.64	1,443.36	1,014.50
Nevada Central Railroad	2,220.40	1,734.22	2,202.40	1,497.40	2,440.70	1,433.62
Nevada Copper Belt Railroad	9,873.35	7,057.07	6,201.23	8,286.19	9,007.36	7,419.03
Nevada Northern Railway	1,724.94	1,817.84	2,068.58	2,254.66	2,253.98	2,183.86
San Pedro, Los Angeles and Salt Lake Railroad	336.90	283.06	303.06	214.80	244.00	341.50
Silver Peak Railroad	33,264.35	38,006.61	29,334.63	29,708.66	34,233.07	30,318.69
Southern Pacific Company	5,867.76	6,217.27	5,623.03	6,008.32	6,153.02	6,360.88
Tonopah and Goldfield Railroad	24.65	13.25	23.00	5.19.60	41.16	94.86
Tonopah and Tidewater Railroad	5,343.66	5,727.30	6,093.31	5,375.40	5,643.90	5,819.70
Virginia and Truckee Railroad	1,876.23	2,044.25	1,777.46	2,022.47	1,461.42	1,464.17
Western Pacific Railway						
Totals	\$66,494.90	\$68,257.56	\$57,935.32	\$60,174.93	\$67,332.04	\$69,634.40

Company	January		February		March	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$294.20	\$384.95	\$222.15	\$230.15	\$237.40	\$249.83
Eureka-Nevada Railway ^a	1,111.65	968.20	711.25	642.70	1,328.35	947.65
Goldfield Consolidated M. & T. Co.		1,643.56	1,884.01	2,032.35	1,605.20	1,806.64
Las Vegas and Tonopah Railroad	1,711.95	511.85	933.32	838.08	1,309.20	1,111.94
Nevada-California-Oregon Railroad	1,914.37	887.10	1,023.30	726.20	2,773.65	1,163.25
Nevada Central Railroad	1,007.00	1,710.08	2,274.10	1,442.63	2,199.13	1,676.10
Nevada Copper Belt Railroad	2,865.80	6,714.01	8,847.75	6,620.67	7,985.57	6,903.01
Nevada Northern Railway	10,906.16	1,982.71	1,718.52	1,552.51	2,141.47	1,707.77
San Pedro, Los Angeles and Salt Lake Railroad	310.69	290.90	261.13	283.75	280.80	259.88
Silver Peak Railroad	32,103.47	25,362.22	96,022.57	22,719.39	37,986.72	30,512.52
Southern Pacific Company	5,679.73	4,883.76	5,154.74	6,069.02	6,087.98	6,842.46
Tonopah and Goldfield Railroad	28.00	36.35	31.80	16.60	26.30	9.15
Tonopah and Tidewater Railroad	5,632.80	4,613.23	5,792.53	4,704.36	6,633.00	5,394.53
Virginia and Truckee Railroad	940.36	538.65	1,018.68	1,097.98	1,812.33	2,538.51
Western Pacific Railway						
Totals	\$64,478.13	\$50,347.62	\$65,835.90	\$47,996.28	\$70,238.06	\$60,121.24

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

MONTHLY INTRASTATE PASSENGER REVENUES OF VARIOUS RAILROADS IN NEVADA

Company	April		May		June	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$254.70	\$268.07	\$415.37	\$224.28	\$235.60	\$201.74
Eureka-Nevada Railway ^a	1,157.35	891.10	962.00	821.60	1,170.55	840.00
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	1,819.28	1,837.61	3,205.11	1,498.54	1,766.34	1,804.01
Nevada-California-Oregon Railroad	1,286.09	1,283.88	1,406.38	1,257.99	1,385.06	1,236.17
Nevada Central Railroad	1,007.20	1,169.25	1,368.96	1,193.15	1,608.35	1,965.10
Nevada Copper Belt Railroad	1,895.02	1,212.72	2,541.25	1,378.55	2,163.47	1,470.60
Nevada Northern Railroad	7,947.93	7,139.53	8,477.54	7,720.76	7,162.08	6,660.62
San Pedro, Los Angeles and Salt Lake Railroad	2,741.02	1,774.50	1,922.77	1,893.27	1,707.69	1,577.65
Silver Peak Railroad	259.66	227.55	277.12	225.55	274.77	236.45
Southern Pacific Company	36,172.70	31,948.76	35,824.22	30,256.99	35,239.28	31,290.98
Tonopah and Goldfield Railroad	5,688.20	6,062.53	7,006.39	5,804.23	5,667.97	5,971.65
Tonopah and Tidewater Railroad	23.56	20.45	43.20	24.15	18.00	16.00
Virginia and Truckee Railroad	5,886.20	6,116.55	6,808.16	6,715.03	6,414.35	6,182.53
Western Pacific Railway	2,196.00	2,533.64	2,683.49	2,628.26	2,862.79	2,715.06
Totals	\$68,215.94	\$61,686.92	\$72,366.92	\$61,685.54	\$67,213.64	\$6,583.55
Total for six months ending Dec. 31						
Total for six months ending June 30			Total for year ending June 30			
1912			1913		1914	
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$2,098.00	\$1,603.79	\$1,699.47	\$1,557.02	\$3,797.47	\$3,160.81
Eureka-Nevada Railway ^a	7,813.40	6,498.35	6,461.15	5,101.25	13,774.55	11,594.60
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	10,196.66	9,254.23	11,991.89	10,621.71	22,188.55	19,876.99
Nevada-California-Oregon Railroad	9,127.00	7,346.46	7,184.41	6,269.86	16,311.41	13,615.32
Nevada Central Railroad	7,665.26	6,693.06	6,798.45	6,064.06	14,453.71	12,692.10
Nevada Copper Belt Railroad	13,504.90	10,206.83	13,443.77	8,899.18	26,948.67	19,096.01
Nevada Northern Railroad	50,163.43	45,713.61	51,277.03	41,743.59	101,430.46	90,467.20
San Pedro, Los Angeles and Salt Lake Railroad	12,157.60	11,398.53	11,806.42	10,527.81	23,963.02	21,923.34
Silver Peak Railroad	1,983.06	1,626.17	1,674.14	1,464.88	3,667.19	3,069.55
Southern Pacific Company	192,768.68	199,793.71	213,868.96	171,246.96	406,135.64	371,042.57
Tonopah and Goldfield Railroad	36,164.64	36,769.06	35,234.96	33,279.45	71,393.60	69,038.50
Tonopah and Tidewater Railroad	162.40	162.40	167.20	122.63	851.25	285.03
Virginia and Truckee Railroad	39,343.30	36,782.76	36,416.08	33,667.27	75,769.33	70,450.03
Western Pacific Railway	11,125.49	12,331.57	10,925.65	11,772.09	22,061.14	24,103.66
Totals	\$393,767.46	\$398,112.56	\$408,458.58	\$342,321.15	\$802,226.04	\$730,433.71

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	July		August		September	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway						
Bullfrog-Goldfield Railroad	\$44.48	\$44.60	\$44.13	\$44.27	\$43.33	\$45.89
Eureka-Nevada Railroad	107.12	67.19	142.11	61.76	192.50	73.08
Goldfield Consolidated M. & T. Co.	1.20	183.73	6.34	186.80	17.50	183.96
Las Vegas and Tonopah Railroad	589.14	863.13	825.06	835.94	356.19	360.30
Nevada-California-Oregon Railway	261.20	247.22	278.08	219.48	907.62	242.49
Nevada Central Railroad						
Nevada Copper Belt Railroad	1,063.23	1,258.69	866.96	1,403.18	950.61	1,586.22
Nevada Northern Railway	283.25	414.50	276.50	321.55	211.76	823.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	73.96	68.40	83.12	79.25	86.74	23.96
Southern Pacific Company	1,410.43	1,081.96	1,276.76	1,016.64	1,308.60	2,384.84
Tonopah and Goldfield Railroad	3,362.90	3,034.10	2,715.32	3,146.67	2,798.79	2,994.74
Tonopah and Tidewater Railroad	7.93	12.51	6.66	11.91	6.47	10.47
Virginia and Truckee Railroad	184.79	108.36	1,227.94	154.66	194.00	162.02
Western Pacific Railroad	62.76	187.14	76.27	126.42	87.40	135.46
Totals	\$7,467.42	\$7,081.33	\$7,625.19	\$7,106.33	\$6,560.56	\$8,506.91

Company	October		November		December	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$43.08	\$44.64	\$43.02	\$44.98	\$42.98	\$44.71
Bullfrog-Goldfield Railroad	151.16	62.63	190.76	62.02	160.49	63.26
Eureka-Nevada Railroad	198.99	148.74	140.69	168.63	201.36	188.06
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	358.94	861.16	358.68	883.97	338.70	368.11
Nevada-California-Oregon Railway	349.36	277.56	351.67	291.18	961.93	294.03
Nevada Central Railroad						
Nevada Copper Belt Railroad	1,066.65	1,252.07	1,011.25	1,686.61	1,206.06	1,597.96
Nevada Northern Railway	38.00	357.95	76.25	242.80	516.95	241.85
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	87.43	79.25	90.40	102.31	91.55	125.10
Southern Pacific Company	1,701.82	1,611.03	2,690.53	2,329.24	2,669.31	2,690.02
Tonopah and Goldfield Railroad	2,549.62	3,283.61	3,048.25	2,881.19	3,183.46	2,977.66
Tonopah and Tidewater Railroad	7.26	10.44	5.42	11.43	8.43	7.47
Virginia and Truckee Railroad	125.97	179.94	99.24	141.29	43.29	69.30
Western Pacific Railroad	87.98	49.44	46.22	59.96	49.30	88.94
Totals	\$6,756.25	\$7,698.46	\$8,152.38	\$8,404.51	\$8,863.80	\$8,666.46

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	January		February		March	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$43.08	\$44.67	\$43.10	\$46.38	\$43.77	\$44.66
Bullfrog-Goldfield Railroad	42.78	49.48	58.71	60.85	53.63	58.72
Eureka-Nevada Railway ^a	170.88	201.46	120.23	214.61	230.43	132.27
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad	348.39	356.32	328.39	652.97	349.59	432.58
Nevada-California-Oregon Railway	319.61	153.13	299.51	271.09	300.37	275.29
Nevada Central Railroad						
Nevada Copper Belt Railroad	1,653.57	1,398.70	1,525.67	1,034.46	1,781.74	1,223.94
Nevada Northern Railway	176.50	1,484.65	174.25	237.50	225.15	267.25
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	104.88	40.43	70.95	77.56	20.55	64.35
Southern Pacific Company	2,223.25	2,458.43	3,288.90	738.52	1,512.11	2,572.56
Tonopah and Goldfield Railroad	2,783.85	2,988.08	2,918.26	3,116.36	3,871.74	3,061.02
Tonopah and Tidewater Railroad	5.38	9.77	7.83	6.84	6.58	4.12
Virginia and Truckee Railroad	135.63	78.49	132.18	187.11	237.79	232.26
Western Pacific Railway	33.06	32.57	27.87	39.95	54.21	67.59
Totals	\$8,040.75	\$8,291.13	\$9,000.85	\$6,684.00	\$8,187.66	\$8,416.61

Company	April		May		June	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$43.10	\$44.71	\$43.04	\$44.90	\$396.62	\$322.05
Bullfrog-Goldfield Railroad	63.33	53.58	102.15	191.53	188.30	166.47
Eureka-Nevada Railway ^a	176.53	232.79	216.03	223.84	109.39	194.52
Goldfield Consolidated M. & T. Co.				96.00		400.50
Las Vegas and Tonopah Railroad	383.84	411.76	324.23	412.86	349.00	415.87
Nevada-California-Oregon Railway	325.93	239.72	249.20	248.12	277.78	241.49
Nevada Central Railroad						
Nevada Copper Belt Railroad	1,746.76	774.34	1,536.10	1,669.31	1,272.35	2,018.16
Nevada Northern Railway	360.40	427.50	406.85	398.00	399.60	656.75
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad	152.69	147.87	28.10	14.15	137.18	154.54
Southern Pacific Company	2,201.27	1,461.84	476.91	901.42	3,158.18	1,323.81
Tonopah and Goldfield Railroad	2,966.02	2,624.61	3,077.25	3,207.75	2,949.21	4,309.15
Tonopah and Tidewater Railroad	7.77	5.59	11.84	14.29	8.46	6.42
Virginia and Truckee Railway	273.57	94.96	328.30	104.56	567.70	79.33
Western Pacific Railway	77.95	196.01	102.96	90.85	173.30	97.14
Totals	\$8,779.16	\$6,715.28	\$6,901.01	\$7,540.58	\$9,855.22	\$10,418.03

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ALL OTHER REVENUE FROM INTRASTATE TRANSPORTATION (MONTHLY) OF RAILROADS IN NEVADA

Company	Total for six months ending June 30				Total for year ending June 30			
	1912	1913	1913	1914	1913	1913	1914	1914
Atchison, Topeka and Santa Fe Railway	\$261.02	\$268.49	\$602.71	\$547.37	\$963.73	\$963.73	\$815.86	\$815.86
Bullfrog-Goldfield Railroad	944.14	379.94	887.07	582.26	1,331.21	1,331.21	962.20	962.20
Eureka-Nevada Railway ^a	566.08	998.91	1,023.49	1,204.49	1,589.57	1,589.57	2,203.40	2,203.40
Goldfield Consolidated M. & T. Co.					436.50		436.50	
Las Vegas and Tonopah Railroad	2,636.71	2,172.61	2,083.49	2,082.36	4,620.20	4,620.20	4,854.97	4,854.97
Nevada-California-Oregon Railroad	1,909.86	1,571.96	1,771.28	1,428.84	3,691.14	3,691.14	3,000.90	3,000.90
Nevada Central Railroad								
Nevada Copper Belt Railroad	6,149.75	8,784.72	9,516.19	8,113.91	15,665.94	15,665.94	16,898.63	16,898.63
Nevada Northern Railroad	1,412.70	1,901.15	1,741.75	2,459.65	3,154.45	3,154.45	4,380.80	4,380.80
San Pedro, Los Angeles and Salt Lake Railroad								
Silver Peak Railroad	513.19	478.27	514.35	498.90	1,027.54	1,027.54	977.17	977.17
Southern Pacific Company	11,047.49	11,113.53	12,865.62	9,456.58	23,913.11	23,913.11	20,570.11	20,570.11
Tonopah and Goldfield Railroad	17,658.34	18,246.97	18,066.33	19,306.92	36,724.67	36,724.67	37,553.89	37,553.89
Tonopah and Tidewater Railroad	41.17	64.23	47.86	47.09	89.03	89.03	111.26	111.26
Virginia and Truckee Railroad	1,876.23	815.47	1,675.17	776.71	3,550.40	3,550.40	1,592.18	1,592.18
Western Pacific Railroad	409.92	615.76	469.34	524.11	879.26	879.26	1,139.86	1,139.86
Totals	\$45,325.60	\$47,412.00	\$50,764.65	\$43,065.63	\$96,090.25	\$96,090.25	\$95,477.63	\$95,477.63

MONTHLY REVENUE FROM INTRASTATE OPERATIONS, OTHER THAN TRANSPORTATION, OF RAILROADS IN NEVADA

Company	July			August			September		
	1912	1913	1913	1912	1913	1913	1912	1913	1913
Atchison, Topeka and Santa Fe Railway	\$5.79	\$50.24	\$35.88	\$15.21	\$35.88	\$35.88	\$16.79	\$27.00	\$27.00
Bullfrog-Goldfield Railroad	16.35	175.00	15.00	15.80	15.00	15.00	13.53	13.00	13.00
Eureka-Nevada Railway ^a		174.40	207.46		207.46	207.46	8.50	8.50	8.50
Goldfield Consolidated M. & T. Co.									
Las Vegas and Tonopah Railroad	22.43	17.35	15.64	48.01	15.64	15.64	19.36	12.68	12.68
Nevada-California-Oregon Railroad	15.66	9.67	12.78	15.27	12.78	12.78	27.59	27.59	27.59
Nevada Central Railroad	49.96	69.03	32.16	18.74	32.16	32.16	83.16	83.16	83.16
Nevada Copper Belt Railroad	189.90	182.68	152.00	182.68	152.00	152.00	183.90	183.90	183.90
Nevada Northern Railroad	185.00	270.00	322.00	586.00	322.00	322.00	204.00	314.00	314.00
San Pedro, Los Angeles and Salt Lake Railroad									
Silver Peak Railroad	5.00	12.00	7.00	5.00	7.00	7.00	5.00	5.00	5.00
Southern Pacific Company	1,994.94	2,203.52	2,292.69	2,895.61	2,292.69	2,292.69	2,638.66	2,477.17	2,477.17
Tonopah and Goldfield Railroad	276.53	445.17	515.01	215.83	515.01	515.01	201.52	381.56	381.56
Tonopah and Tidewater Railroad	29.00	21.00	21.00	25.00	21.00	21.00	30.50	30.50	30.50
Virginia and Truckee Railroad	77.84	90.29	102.18	64.88	102.18	102.18	67.53	72.61	72.61
Western Pacific Railroad	94.54	176.90	96.53	169.14	96.53	96.53	116.32	137.41	137.41
Totals	\$2,898.90	\$3,135.43	\$3,768.23	\$4,222.21	\$3,768.23	\$3,768.23	\$3,574.40	\$4,262.71	\$4,262.71

^aFigures taken from report of Nevada Transportation Company which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

MONTHLY REVENUE FROM INTRASTATE OPERATIONS, OTHER THAN TRANSPORTATION,
OF RAILROADS IN NEVADA

Company	October		November		December	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$12.89	\$3.95	\$22.43	\$34.58	\$65.84	\$13.58
Burling-Goldfield Railroad.....	51.34	15.00	16.00	15.00	23.25	15.00
Eureka-Nevada Railway.....	170.59	108.00	1.96	81.56	17.74	57.41
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	19.87	18.18	19.57	22.78	21.85	21.81
Nevada-California-Oregon Railway.....	42.95	21.79	28.54	27.85	26.85	17.70
Nevada Central Railroad.....	62.04	73.67	53.67	8.47	71.14	7.30
Nevada Copper Belt Railroad.....	76.52	297.00	79.67	137.25	400.39	400.39
Nevada Northern Railway.....	425.00	204.00	373.00	382.00	538.00	414.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad.....	5.00	23.00	23.90	21.00	5.35	19.00
Southern Pacific Company.....	2,897.84	3,026.12	2,499.87	2,155.15	2,293.80	5,337.12
Tonopah and Goldfield Railroad.....	243.53	219.58	298.77	395.24	296.71	290.07
Tonopah and Tidewater Railroad.....	24.00	21.00	21.00	22.00	20.33	20.50
Virginia and Truckee Railroad.....	47.66	288.41	67.99	31.57	98.46	342.64
Western Pacific Railway.....	103.41	163.22	70.90	418.01	94.83	1.99
Totals	\$3,680.64	\$4,419.35	\$3,581.37	\$1,564.82	\$3,567.40	\$6,952.51
Company	January		February		March	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$40.43	\$23.35	\$47.64	\$22.22	\$39.66	\$39.72
Burling-Goldfield Railroad.....	89.00	15.00	20.00	19.00	40.00	15.00
Eureka-Nevada Railway.....	124.49	104.55	55.25	53.80	61.21	89.87
Goldfield Consolidated M. & T. Co.						
Las Vegas and Tonopah Railroad.....	57.34	37.04	12.01	20.77	20.30	20.10
Nevada-California-Oregon Railway.....	35.72	20.69	20.42	22.42	16.82	7.48
Nevada Central Railroad.....	112.18	30.78	30.78	124.85	49.82	17.00
Nevada Copper Belt Railroad.....	116.68	260.47	159.65	132.83	324.74	514.66
Nevada Northern Railway.....	625.00	492.00	222.00	305.00	388.00	243.00
San Pedro, Los Angeles and Salt Lake Railroad						
Silver Peak Railroad.....	8.85	33.00	5.00	13.00	25.70	20.00
Southern Pacific Company.....	2,290.06	1,345.19	2,082.78	1,168.13	2,012.50	1,471.38
Tonopah and Goldfield Railroad.....	329.34	458.28	319.20	564.94	293.23	545.75
Tonopah and Tidewater Railroad.....	21.04	23.45	21.00	21.00	19.15	19.15
Virginia and Truckee Railroad.....	52.53	188.41	43.88	157.01	86.87	85.96
Western Pacific Railway.....	127.18	113.71	100.61	101.90	90.27	98.20
Totals	\$3,952.89	\$3,101.23	\$3,138.99	\$2,681.67	\$3,444.77	\$2,156.96

*Figures taken from report of Nevada Transportation Company which operates the Eureka-Nevada Railway.

Italic figures denote deficit.

MONTHLY REVENUE FROM INTRASTATE OPERATIONS OTHER THAN TRANSPORTATION,
OF RAILROADS IN NEVADA

Company	April		May		June	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog Goldfield Railroad	\$36.95	\$69.45	\$40.23	\$30.91	\$46.14	\$49.67
Eureka Nevada Railway ^a	16.00	15.00	15.26	5.34	15.00	5.00
Goldfield Consolidated M. & T. Co.	126.42	160.00	57.00	52.00	114.09	8.76
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	20.55	32.14	20.31	23.14	12.48	19.63
Nevada Central Railroad	26.09	5.54	6.45	8.22	11.52	8.87
Nevada Copper Belt Railroad	72.10	62.04	25.61	29.54	158.23	89.01
Nevada Northern Railroad	373.00	253.91	159.32	50.89	251.44	24.62
San Pedro, Los Angeles and Salt Lake Railroad	359.00	272.00	343.00	329.00	213.00	329.00
Silver Peak Railroad						
Southern Pacific Company	9.95	5.00	30.00	14.00	17.00	16.50
Tonopah and Goldfield Railroad	2,910.53	2,526.72	3,424.05	1,692.54	3,156.59	757.77
Tonopah and Tidewater Railroad	254.34	440.75	380.98	426.84	147.67	387.33
Virginia and Truckee Railroad	21.00	21.00	22.00	21.00	24.67	28.89
Western Pacific Railroad	91.06	55.63	96.16	28.51	18.79	8.20
Totals	167.53	101.08	81.86	154.71	118.23	106.23
	\$4,486.60	\$4,015.25	\$4,564.73	\$2,784.78	\$4,363.90	\$276.18
Total for six months ending Dec. 31						
Total for six months ending June 30						
Company	Total for six months ending Dec. 31		Total for six months ending June 30		Total for year ending June 30	
	1912	1913	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway						
Bullfrog Goldfield Railroad	\$141.89	\$165.23	\$251.05	\$225.33	\$392.94	\$390.56
Eureka Nevada Railway ^a	141.07	90.00	194.26	70.34	335.33	160.34
Goldfield Consolidated M. & T. Co.	198.79	701.49	541.46	474.07	740.25	1,176.56
Las Vegas and Tonopah Railroad						
Nevada-California-Oregon Railway	151.10	138.44	113.50	152.87	264.60	291.31
Nevada Central Railroad	157.86	67.74	116.29	58.06	274.15	125.80
Nevada Copper Belt Railroad	359.18	150.43	481.72	220.14	840.90	370.62
Nevada Northern Railroad	554.76	1,184.51	1,385.33	140.83	1,940.09	1,325.25
San Pedro, Los Angeles and Salt Lake Railroad	2,271.00	1,986.00	2,063.00	1,980.00	4,424.00	3,956.00
Silver Peak Railroad						
Southern Pacific Company	49.25	88.00	96.50	101.50	145.75	189.50
Tonopah and Goldfield Railroad	14,660.82	15,286.76	15,908.55	7,447.61	30,567.37	22,734.37
Tonopah and Tidewater Railroad	1,543.81	2,196.73	1,631.76	2,831.94	3,175.67	5,028.67
Virginia and Truckee Railroad	132.66	126.00	123.82	134.69	261.48	280.69
Western Pacific Railroad	424.39	917.61	435.91	522.75	860.30	1,440.36
Totals	648.24	994.06	685.73	675.88	1,333.97	1,669.94
	\$21,634.92	\$24,103.06	\$24,021.88	\$15,016.06	\$45,566.80	\$39,119.11

^a Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.
Italic figures denote deficit.

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	July		August		September	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$53.21	\$84.74	\$59.34	\$80.15	\$60.12	\$72.39
Bullfrog-Goldfield Railway	663.41	663.01	888.22	582.03	1,270.84	639.15
Eureka-Nevada Railway	2,780.77	2,112.42	2,804.18	3,387.25	3,368.25	2,900.35
Goldfield Consolidated M. & T. Co.	7,763.33	6,988.75	7,984.84	8,148.75	7,572.71	7,080.75
Las Vegas and Tonopah Railway	3,586.76	4,236.02	3,630.23	4,303.92	3,469.04	4,331.35
Nevada-California-Oregon Railway	5,373.72	4,602.84	4,663.81	3,773.01	4,739.07	4,360.60
Nevada Central Railroad	1,881.45	1,672.59	1,466.91	1,581.32	1,777.07	1,500.52
Nevada Copper Belt Railroad	21,637.36	12,545.60	16,121.15	12,380.03	17,070.51	12,485.33
Nevada Northern Railroad	89,667.38	85,884.74	94,988.68	95,811.95	85,452.29	87,712.57
San Pedro, Los Angeles and Salt Lake Railroad	3,667.40	3,132.43	3,178.25	3,192.36	2,497.59	3,142.87
Silver Peak Railroad	521.41	648.18	581.27	529.13	494.73	457.33
Southern Pacific Company	58,980.46	55,672.63	54,515.62	62,619.43	58,490.82	56,323.37
Tonopah and Goldfield Railroad	31,239.84	30,603.57	28,563.46	31,684.58	27,046.54	29,963.83
Tonopah and Tidewater Railroad	13,688.88	146.70	95.09	137.11	72.21	122.41
Virginia and Truckee Railroad	13,318.57	11,481.68	13,161.36	11,488.66	12,383.68	11,242.38
Western Pacific Railroad	3,378.22	3,903.79	3,216.20	3,196.64	3,172.04	3,496.56
Totals	\$244,582.17	\$224,349.69	\$235,658.71	\$242,748.32	\$228,887.45	\$225,861.96

Company	October		November		December	
	1912	1913	1912	1913	1912	1913
Atchison, Topeka and Santa Fe Railway	\$55.97	\$48.59	\$65.45	\$79.56	\$108.82	\$58.29
Bullfrog-Goldfield Railway	1,042.92	630.72	815.54	778.62	892.60	727.86
Eureka-Nevada Railway	4,122.72	2,576.97	4,101.96	2,525.00	2,261.08	2,737.03
Goldfield Consolidated M. & T. Co.	7,913.90	7,849.25	7,204.75	7,417.75	7,265.59	7,340.00
Las Vegas and Tonopah Railway	3,633.64	5,195.97	3,294.86	3,824.59	3,313.96	3,313.96
Nevada-California-Oregon Railway	5,291.07	5,388.26	4,216.92	3,963.81	3,245.48	2,455.73
Nevada Central Railroad	1,636.36	1,529.47	1,444.66	1,069.77	1,800.78	1,280.90
Nevada Copper Belt Railroad	11,927.37	19,143.68	19,143.68	16,612.32	18,969.78	13,457.22
Nevada Northern Railroad	24,855.58	95,915.81	74,447.83	88,799.68	78,533.73	94,748.60
San Pedro, Los Angeles and Salt Lake Railroad	2,586.08	3,224.44	3,363.89	2,963.86	2,906.86	2,769.39
Silver Peak Railroad	765.29	564.89	497.61	467.56	436.62	686.00
Southern Pacific Company	64,950.05	72,346.28	58,251.62	58,006.16	59,563.73	64,097.77
Tonopah and Goldfield Railroad	30,678.92	30,881.17	29,843.67	29,654.86	29,654.86	25,499.39
Tonopah and Tidewater Railroad	91.12	102.96	72.66	126.20	109.84	90.42
Virginia and Truckee Railroad	12,837.22	12,900.54	14,008.68	10,606.15	11,196.14	10,279.84
Western Pacific Railroad	3,882.29	3,507.78	4,539.17	5,085.66	2,673.44	2,936.26
Totals	\$185,222.97	\$254,582.47	\$225,302.95	\$231,961.55	\$223,548.89	\$232,438.78

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	January		February		March	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$53.51	\$58.09	\$50.74	\$58.60	\$53.43	\$54.38
Bullfrog-Goldfield Railroad	672.26	743.94	553.84	492.82	597.50	422.88
Eureka-Nevada Railway ^a	2,208.36	1,987.42	1,365.75	1,437.92	2,451.94	2,162.72
Goldfield Consolidated M. & T. Co.	6,714.33	7,787.25	6,548.05	6,917.75	7,215.24	7,888.52
Las Vegas and Tonopah Railroad	3,593.96	3,843.42	3,866.21	4,057.31	3,870.23	4,485.33
Nevada-California-Oregon Railway	2,333.87	1,252.17	2,380.15	2,183.48	2,923.40	2,993.33
Nevada Central Railroad	1,246.96	1,372.07	1,261.25	1,333.23	1,136.11	1,586.59
Nevada Copper Belt Railroad	20,321.04	10,209.34	15,739.71	8,467.32	19,200.16	9,377.31
Nevada Northern Railway	80,183.84	86,580.46	83,040.53	76,269.00	96,043.13	96,862.37
Silver Peak Railroad	2,171.63	2,787.24	2,138.64	3,044.98	2,771.68	4,927.12
Southern Pacific Company	55,259.82	42,680.60	55,457.87	62,930.07	428.32	682.55
Tonopah and Goldfield Railroad	27,301.31	26,286.97	27,189.00	44,424.98	60,344.82	54,592.19
Tonopah and Tidewater Railroad	82.62	108.43	27.18	26,535.67	28,728.57	27,714.85
Virginia and Truckee Railway	9,844.55	7,719.75	9,854.58	8,455.81	14,388.16	68.79
Western Pacific Railway	1,783.97	1,861.36	1,729.31	1,879.10	3,162.93	10,297.86
Totals	\$214,761.94	\$196,865.27	\$217,159.06	\$186,768.78	\$242,448.84	\$227,970.56
Company	April		May		June	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$80.05	\$104.16	\$83.27	\$75.31	\$432.76	\$371.72
Bullfrog-Goldfield Railroad	621.32	633.99	2,124.44	638.80	1,631.60	636.89
Eureka-Nevada Railway ^a	3,181.64	2,986.41	2,170.49	1,649.87	1,631.60	1,618.90
Goldfield Consolidated M. & T. Co.	6,633.66	7,278.50	4,158.43	7,777.25	7,086.76	7,086.76
Las Vegas and Tonopah Railroad	3,670.07	4,835.01	3,674.79	5,860.48	3,649.15	4,851.45
Nevada-California-Oregon Railway	1,660.38	3,357.00	3,864.36	3,821.10	3,821.10	4,020.34
Nevada Central Railroad	1,420.43	1,761.82	2,028.53	1,779.01	1,563.34	3,317.51
Nevada Copper Belt Railroad	18,420.01	8,346.80	20,222.13	11,771.07	18,503.86	8,681.89
Nevada Northern Railway	84,324.31	88,346.30	79,722.13	96,057.62	88,503.82	89,683.22
Silver Peak Railroad	3,476.34	3,550.45	2,390.15	3,843.83	2,722.39	3,318.75
Southern Pacific Company	66,902.01	57,643.26	60,091.07	54,753.28	62,043.98	51,381.84
Tonopah and Goldfield Railroad	26,624.72	28,971.89	29,570.37	29,449.38	27,863.98	30,897.24
Tonopah and Tidewater Railroad	14,650.19	13,677.77	23,134.07	13,285.85	104.82	80.19
Virginia and Truckee Railway	9,844.55	10,043.42	11,699.08	11,173.88	11,594.62	9,862.91
Western Pacific Railway	3,551.10	5,202.42	4,654.85	5,553.68	3,686.09	4,731.62
Totals	\$234,224.73	\$221,856.59	\$242,015.68	\$232,530.91	\$234,475.38	\$219,973.09

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TOTAL MONTHLY INTRASTATE REVENUES, FOR RAILROADS IN NEVADA

Company	Total for six months ending Dec. 31			Total for six months ending June 30			Total for year ending June 30		
	1912	1913	1914	1913	1914	1915	1913	1914	1915
Atchison, Topeka and Santa Fe Railway	\$402.91	\$483.72	\$553.76	\$553.76	\$772.70	\$1,256.67	\$1,256.67	\$1,256.67	\$1,256.67
Bullfrog-Goldfield Railroad	5,523.60	3,911.51	3,784.31	3,784.31	3,943.32	9,307.91	9,307.91	9,307.91	9,307.91
Eureka-Nevada Railway ^a	19,238.96	16,239.02	12,968.53	12,968.53	11,843.24	32,207.49	32,207.49	32,207.49	32,207.49
Goldfield Consolidated M. & T. Co.	45,705.22	44,835.25	41,638.05	41,638.05	44,742.00	87,343.27	87,343.27	87,343.27	87,343.27
Las Vegas and Tonopah Railroad	21,864.47	25,206.81	23,175.41	23,175.41	27,833.50	45,089.88	45,089.88	45,089.88	45,089.88
Nevada-California-Oregon Railway	27,520.07	24,534.25	18,371.96	18,371.96	17,186.84	45,892.03	45,892.03	45,892.03	45,892.03
Nevada Central Railroad	10,009.17	8,684.57	8,768.72	8,768.72	8,569.88	18,765.89	18,765.89	18,765.89	18,765.89
Nevada Copper Belt Railroad	113,810.32	79,407.87	112,297.87	112,297.87	56,556.63	226,108.19	226,108.19	226,108.19	226,108.19
Nevada Northern Railway	447,945.49	548,883.35	524,859.18	524,859.18	532,712.56	972,804.67	972,804.67	972,804.67	972,804.67
San Pedro, Los Angeles and Salt Lake Railroad	18,210.07	18,416.35	15,565.75	15,565.75	21,047.20	33,775.82	33,775.82	33,775.82	33,775.82
Silver Peak Railroad	3,296.83	3,363.09	3,170.88	3,170.88	3,438.14	6,467.71	6,467.71	6,467.71	6,467.71
Southern Pacific Company	854,752.30	369,067.64	364,456.14	364,456.14	306,456.66	719,208.44	719,208.44	719,208.44	719,208.44
Tonopah and Goldfield Railroad	176,596.92	178,287.50	166,419.20	166,419.20	169,797.03	343,316.12	343,316.12	343,316.12	343,316.12
Tonopah and Tidewater Railroad	609.80	725.80	598.03	598.03	497.41	1,107.83	1,107.83	1,107.83	1,107.83
Virginia and Truckee Railway	76,555.65	67,949.25	69,461.59	69,461.59	57,552.58	146,317.24	146,317.24	146,317.24	146,317.24
Western Pacific Railway	20,861.36	22,138.79	18,518.25	18,518.25	23,086.46	39,379.61	39,379.61	39,379.61	39,379.61
Totals	\$1,343,203.14	\$1,411,962.77	\$1,386,096.63	\$1,386,096.63	\$1,283,935.20	\$2,728,298.77	\$2,728,298.77	\$2,728,298.77	\$2,728,298.77

^aFigures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

TOTAL NEVADA INTRASTATE BUSINESS FOR THE YEARS ENDING JUNE 30, 1913 AND 1914

Company	Freight revenue		Passenger revenue		Other transportation revenue	
	1913	1914	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$3,843.90	\$2,971.48	\$3,797.47	\$3,160.81	\$863.73	\$815.86
Bullfrog-Goldfield Railway	16,103.12	13,108.70	13,774.55	11,694.60	1,331.21	962.20
Eureka-Nevada Railway	87,243.27	89,140.75	89,140.75	89,140.75	1,589.57	2,203.40
Goldfield Consolidated M. & T. Co.	17,966.53	27,517.04	27,517.04	27,517.04	436.50	436.50
Las Vegas and Tonopah Railroad	25,625.33	24,979.17	24,979.17	24,979.17	4,854.97	8,000.80
Nevada-California-Oregon Railway	3,471.28	4,091.78	4,091.78	4,091.78	3,681.14	3,681.14
Nevada Central Railroad	181,533.49	98,645.47	98,645.47	98,645.47	16,896.63	16,896.63
Nevada Copper Belt Railroad	863,795.76	982,811.91	101,430.46	90,467.20	15,666.94	4,360.80
Nevada Northern Railway	9,812.80	17,539.21	23,963.02	21,932.34	3,164.46	
Silver Peak, Los Angeles and Salt Lake Railroad	1,627.23	2,545.01	3,667.19	3,069.55	1,027.54	977.17
Southern Pacific Company	258,592.32	280,176.25	406,135.64	371,042.57	23,913.11	20,670.11
Tonopah and Goldfield Railroad	233,022.18	236,443.47	71,393.60	69,038.50	35,724.67	37,553.89
Tonopah and Tidewater Railroad	406.07	566.23	351.25	285.03	89.08	111.26
Virginia and Truckee Railroad	66,147.16	62,019.26	75,759.38	70,450.03	3,550.40	1,692.18
Western Pacific Railway	15,115.24	18,301.79	22,051.14	24,103.66	879.26	1,139.86
Totals	\$1,784,425.68	\$1,830,867.52	\$302,225.04	\$730,433.71	\$36,090.25	\$95,477.63

Company	Revenue other than transportation		Total intrastate revenue	
	1913	1914	1913	1914
Atchison, Topeka and Santa Fe Railway	\$392.94	\$390.56	\$1,256.67	\$1,206.42
Bullfrog-Goldfield Railway	335.33	160.34	9,307.91	7,254.33
Eureka-Nevada Railway	740.25	1,175.56	32,207.49	28,082.26
Goldfield Consolidated M. & T. Co.			87,343.27	89,577.25
Las Vegas and Tonopah Railroad	264.60	291.31	45,039.88	52,539.31
Nevada-California-Oregon Railway	274.15	125.80	45,892.03	41,721.09
Nevada Central Railroad	840.90	370.62	18,765.89	17,154.50
Nevada Copper Belt Railroad	1,940.09	1,325.39	226,108.19	135,964.50
Nevada Northern Railway	4,424.00	3,964.00	972,804.67	1,081,596.91
Nevada Northern Railway			33,775.82	39,462.55
Silver Peak, Los Angeles and Salt Lake Railroad	145.75	189.50	6,467.71	6,801.23
Southern Pacific Company	30,567.37	22,734.37	719,208.44	674,523.30
Tonopah and Goldfield Railroad	3,175.67	5,028.67	343,316.12	348,064.53
Tonopah and Tidewater Railroad	261.48	280.69	1,107.53	1,229.21
Virginia and Truckee Railroad	860.30	1,440.36	146,317.24	125,501.33
Western Pacific Railway	1,333.97	1,669.94	39,379.61	46,215.25
Totals	\$45,556.80	\$39,119.11	\$2,725,238.77	\$2,605,887.97

*Figures taken from report of Nevada Transportation Company, which operates the Eureka-Nevada Railway.

ANNUAL REPORTS
OF
Telegraph, Telephone, Express, Car Com-
panies, and Electric Railways for
Years 1913 and 1914

CAPITAL STOCK

Company	Capital stock common, par value outstanding		Capital stock, preferred, par value outstanding		Capital stock total par value outstanding	
	1913	1914	1913	1914	1913	1914
American Express Company					\$18,000,000.00	\$18,000,000.00
Globe Express Company	\$3,000,700.00	\$3,000,700.00			3,000,700.00	3,000,700.00
Wells, Fargo & Company Express	23,967,400.00	23,967,400.00			23,967,400.00	23,967,400.00
Nevada Interurban Railway	44,635.00	44,635.00			44,635.00	44,635.00
Reno Traction Company	1,000,000.00	1,000,000.00			1,000,000.00	1,000,000.00
The Pullman Company					120,000,000.00	120,000,000.00
Bank of Austin ^a						
Bell Telephone Company of Nevada ^b	316,300.00	316,300.00			316,300.00	316,300.00
Bridgeport Telephone and Telegraph Company						
Churchill County Telephone and Telegraph System	100,000.00	100,000.00			100,000.00	100,000.00
Consolidated Power and Telephone Company	49,280.00	50,780.00			49,280.00	50,780.00
Elko County Telephone and Telegraph Company	33,980.00	35,310.00			33,980.00	35,310.00
Golconda Telephone and Power Company		500,000.00				500,000.00
Interstate Telegraph Company	36,700.00	45,000.00		\$56,605.00	36,700.00	101,605.00
Nevada, California and Oregon Telephone and Telegraph Co. ^c	250,000.00	250,000.00			250,000.00	250,000.00
Nevada Consolidated Telephone and Telegraph Company						
Nevada Northern Railway Telegraph Department	177,166.67	177,166.67			177,166.67	177,166.67
Nevada Telephone Cable Company	25,000.00	25,000.00			25,000.00	25,000.00
Searchlight and Western Telephone Company ^d	10,000.00	10,000.00			10,000.00	10,000.00
The United Farmers Telephone and Telegraph Company						
Utah, Nevada and Idaho Telephone Company	99,817,100.00	99,817,100.00			99,817,100.00	99,817,100.00
Western Union Telephone Company	7,000.00	5,000.00	\$47,510.00	\$47,510.00	54,510.00	52,510.00
White Pine Telephone Company						
Yerington Electric Company						
Totals	\$128,885,961.67	\$129,344,451.67	\$47,510.00	\$104,115.00	\$128,933,371.67	\$287,448,566.67

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cFormerly operating under the name of the California and Oregon Telegraph Company.^dCompany disincorporated during the fiscal year ending June 30, 1914.

FUNDED DEBT, AND CAPITAL STOCK

Company	Dividends declared		Funded debt outstanding		Interest accrued	
	1913	1914	1913	1914	1913	1914
American Express Company.....	\$2,117,700.00	\$1,400,800.00				
Globe Express Company.....	180,042.00	130,042.00				
Wells Fargo & Company Express.....	2,386,740.00	1,917,392.00				
Nevada Interurban Railway.....						
Reno Traction Company.....			\$136,000.00	\$136,000.00	\$2,160.00	\$2,160.00
The Pullman Company.....	9,599,500.66	9,599,560.68				
Bank of Austin ^a						
Bell Telephone Company of Nevada ^b						
Bridgeport Telephone and Telegraph Company.....						
Churchill County Telephone and Telegraph System.....				6,000.00		360.00
Consolidated Power and Telephone Company.....						
Elko County Telephone and Telegraph Company.....	3,862.40	3,942.40				
Golconda Telephone and Power Company.....	2,040.00	3,581.00				
Interstate Telegraph Company.....				250,000.00		15,000.00
Nevada, California and Oregon Telephone and Telegraph Co. ^c				35,000.00		525.00
Nevada Consolidated Telephone and Telegraph Company.....		1,562.50				
Nevada Northern Railway Telegraph Department.....						
Nevada Telephone-Telegraph Company.....						
Postal Telegraph Cable Company.....	13,287.51	22,145.85				
Searchlight and Western Telephone Company ^d						
The United Farmers Telephone and Telegraph Company.....						
Utah, Nevada and Idaho Telephone Company.....	2,992,166.25	3,490,564.00	32,602,000.00	32,602,000.00	1,520,100.00	1,520,100.00
Western Union Telegraph Cable Company.....	3,800.80	5,300.80	6,000.00	5,000.00	400.00	400.00
White Pine Telephone Company.....						
Yerington Electric Company.....						
Totals	\$17,909,139.62	\$16,624,841.23	\$32,743,000.00	\$33,034,000.00	\$1,522,660.00	\$1,538,545.00

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cFormerly operating under the name of the California and Oregon Telegraph Company.^dCompany reincorporated during the fiscal year ending June 30, 1914.

ASSETS, LIABILITIES AND COST OF PLANT, AND EQUIPMENT

Company	Total assets and liabilities		Cost of construction for year		Total cost of plant to date	
	1913	1914	1913	1914	1913	1914
American Express Company	\$61,550,305.30	\$44,209,085.65	\$965,731.73	\$666,291.41	\$12,791,467.45	\$13,457,753.99
Globe Express Company	3,622,517.49	3,487,089.09	1,996.95	1,540.96	91,224.53	82,763.54
Wells Fargo & Company Express	33,364,260.26	38,474,867.40	1,294,161.60	46,214.65	7,026,254.19	7,072,468.64
Nevada Interurban Railway	87,727.69	96,024.66	3,737.05	3,352.59	96,696.26	96,083.86
Reno Traction Company	1,230,047.06	1,233,263.60	827.18	3,867.04	1,223,473.69	1,227,330.73
The Pullman Company	156,704,964.83	165,608,975.72	12,541,194.89	8,769,739.43	135,903,885.05	144,673,625.48
Bank of Austin ^a	12,623.83	387,717.89	57,132.44	351,276.98	316,771.57	669,387.06
Ball Telephone Company of Nevada ^b	100.00	100.00	5,395.18	6,388.08	12,324.19	18,707.25
Bridgeport Telephone and Telegraph Company	(c)	(c)	125.77	488.09	1,212.22	1,695.31
Churchill County Telephone and Telegraph System	3,300.00	4,807.31	5,670.02	2,000.00	58,089.90	60,089.90
Consolidated Power and Telephone Company	20,144.83	25,263.29	27,879.48	3,973.57	60,830.64	62,832.82
Elko County Telephone and Telegraph Company		71,966.31		20,245.52		773,782.64
Golconda Telephone and Power Company	3,756.16	23,279.08	400.00	110,606.60	36,745.06	155,782.17
Interstate Telegraph Company		311.00				
Nevada, California and Oregon Telephone and Telegraph Co. ^d						
Nevada Consolidated Telephone and Telegraph Company						
Nevada Northern Railway Telegraph Department	19,129.28	10,084.64		862.59	191,446.98	192,299.57
Nevada Telephone-Cable Company	16,311.28	5,197.82			10,000.00	10,000.00
Postal Telegraph-Cable Company	412.62	100.00				
Searchlight and Western Telephone Company ^e						
The United Farmers Telephone and Telegraph Company						
Utah, Nevada and Idaho Telephone Company	9,316,028.29	12,421,352.31	1,101,862.34	5,376,179.64	130,247,942.88	135,624,022.52
Western Union Telegraph Company	1,706.80	1,275.90	859.48	699.83		
White Pine Telephone Company	15,023.81	13,142.75				
Yerington Electric Company						
Totals	\$270,868,358.53	\$266,073,834.37	\$15,996,904.16	\$15,368,706.99	\$238,063,005.56	\$304,187,737.57

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cSee electric utility reports of this company.^dFormerly operating under the name of the California and Oregon Telegraph Company.^eCompany disincorporated during the fiscal year ending June 30, 1914.

INCOME ACCOUNT

Company	Gross earnings from operation		Operating expenses		Net operating income or deficit	
	1913	1914	1913	1914	1913	1914
American Express Company ^a	\$47,849,009.87	\$45,102,949.38	\$46,916,939.84	\$45,366,381.14	\$832,069.83	\$553,431.76
Globe Express Company ^a	820,911.63	679,234.05	786,725.78	694,467.43	34,185.86	15,193.39
Wells, Fargo & Company Express ^a	34,394,813.78	31,862,982.71	32,918,788.36	30,416,280.13	2,016,025.42	1,446,682.58
Nevada Interurban Railway.....	9,425.75	7,581.42	9,535.24	8,362.69	109.49	771.17
Reno Traction Company.....	57,878.05	58,817.20	42,327.17	47,968.55	15,550.88	10,878.55
The Pullman Company.....	40,032,742.29	41,499,396.04	27,676,350.75	29,228,480.30	12,357,391.54	12,270,915.74
Bank of Austin ^b	404.73	3,500.45	225.66	2,005.45	179.07	1,495.00
Bell Telephone Company of Nevada ^c	81,028.98	80,334.91	71,864.83	73,394.78	9,344.11	6,950.13
Bridgeport Telephone and Telegraph Company.....	400.00	600.00	180.00	200.00	220.00	400.00
Churchill County Telephone and Telegraph System.....	6,467.55	7,529.90	3,226.80	3,780.00	3,241.25	3,749.90
Consolidated Telephone and Power Company.....	2,277.04	2,538.15	1,182.13	1,298.98	1,094.91	1,249.22
Elko County Telephone and Telegraph Company.....	19,708.29	21,206.31	11,842.91	14,861.31	7,860.38	6,345.00
Golconda Telephone and Power Company.....	9,608.77	14,623.09	5,608.05	10,280.84	4,000.72	4,392.25
Interstate Telegraph Company.....	12,932.17	35,557.36	38,872.73	38,872.73	3,715.37	3,715.37
Nevada, California and Oregon Telephone and Telegraph Co., d.....	7,228.81	7,228.81	9,624.02	8,413.34	3,823.15	1,981.66
Nevada Consolidated Telephone and Telegraph Company.....	10,280.49	10,468.77	8,413.34	8,413.34	2,065.43	2,065.43
Nevada Northern Railway Telegraph Department.....	77,041.92	9,082.81	15,135.14	14,946.00	4,854.66	5,643.19
Nevada Telephone-Telegraph Company.....	27,373.88	69,097.09	60,714.09	67,102.18	26,827.83	1,994.91
Postal Telegraph-Cable Company.....	540.00	29,408.98	19,112.01	18,791.64	8,261.87	10,617.29
Searchlight and Western Telephone Company ^e	5,325.20	500.00	127.88	400.00	412.62	100.00
The United Farmers Telephone and Telegraph Company.....		7,886.01	5,010.55	7,407.77	314.55	478.24
Utah, Nevada and Idaho Telephone Company.....	46,985,998.28	45,593,395.40	37,670,232.82	36,666,576.96	8,715,710.44	8,942,818.44
Western Union Telegraph Company.....	15,611.82	15,376.80	6,894.23	7,678.84	8,627.69	7,698.96
White Pine Telephone Company.....	2,490.72	6,769.91	2,156.16	6,498.57	535.55	261.04
Yerington Electric Company.....						
Totals	\$170,962,230.94	\$155,061,064.50	\$146,222,762.41	\$142,728,596.94	\$24,139,518.03	\$22,382,467.06

^aOperating expenses include amounts paid for express privileges.

^bThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.

^cFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.

^dFormerly operating under the name of the California and Oregon Telegraph Company.

^eCompany reincorporated during the fiscal year ending June 30, 1914.

Italic figures denote deficit.

INCOME ACCOUNT

Company	All other income		Taxes paid		Gross corporate income	
	1913	1914	1913	1914	1913	1914
American Express Company	\$1,396,817.72	\$618,625.53	\$960,192.36	\$381,337.90	\$1,968,686.19	\$26,744.06
Globe Express Company	162,927.73	188,997.53	12,250.00	12,049.33	184,863.63	161,764.96
Wells, Fargo & Company Express	1,400,610.85	1,314,200.69	357,201.96	402,426.02	3,069,434.32	2,355,457.25
Nevada Interurban Railway					769.49	771.17
Reno Traction Company					13,089.36	9,109.86
The Pullman Company		654.00	2,461.62	2,422.79	11,895,020.12	12,270,915.74
Bank of Austin ^b			962,371.42	140.07	39.00	1,354.83
Bell Telephone Company of Nevada ^c	16.50	2,980.64	1,686.25	4,137.37	7,765.36	5,773.40
Bridgeport Telephone and Telegraph Company					220.00	400.00
Churchill County Telephone and Telegraph System					3,241.25	3,749.90
Consolidated Power and Telephone Company					1,094.91	1,243.22
Elko County Telephone and Telegraph Company	4,000.00	1,500.00	436.12	616.63	11,424.28	7,223.37
Golconda Telephone and Power Company	2,416.00		186.75	121.59	6,220.37	4,270.66
Interstate Telegraph Company						4,329.40
Nevada, California and Oregon Telephone and Telegraph Co. ^d	32.60	110.47	406.62	283.38	2,954.13	1,973.46
Nevada Consolidated Telephone and Telegraph Company						2,065.43
Nevada Northern Railway Telegraph Department					5,454.10	6,462.64
Nevada Telephone-Telegraph Company					26,602.73	2,703.72
Postal Telegraph Company	274.90	172.55	498.06	382.65	7,792.17	10,234.64
Searchlight and Western Telephone Company ^e			86.00	44.20	327.62	55.90
The United Farmers Telephone and Telegraph Company			82.69	478.24	231.96	376.11
Utah, Nevada and Idaho Telephone Company						
Western Union Telegraph Company	1,037,449.54	1,070,881.62	1,020,000.00	1,185,000.00	8,733,159.96	8,728,660.06
White Pine Telephone Company			288.70	981.87	8,838.89	7,335.09
Yerington Electric Company					335.56	261.04
Totals	\$4,004,545.89	\$3,196,353.31	\$2,720,134.66	\$3,109,159.37	\$25,425,237.82	\$23,534,791.31

^aTaxes already included in operating expenses.^bThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^cFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^dFormerly operating under the name of the California and Oregon Telephone Company.^eCompany discontinued during the fiscal year ending June 30, 1914.*Italic figures denote deficit.*

INCOME ACCOUNT

Company	Total deductions from gross corporate income		Net corporate income		Dividends paid	
	1913	1914	1913	1914	1913	1914
American Express Company	\$182,887.63	\$174,607.06	\$1,885,807.56	\$200,751.14		
Globe Express Company			184,863.63	161,754.86	\$180,042.00	\$180,042.00
Wells Fargo & Company Express	14,007.82	13,861.80	3,045,426.40	2,844,586.35	2,386,740.00	1,917,382.00
Nevada Interurban Railway			109.49	771.17		
Reno Traction Company	4,375.32	3,886.15	8,714.04	5,223.71		
The Pullman Company			11,395,020.12	12,270,915.74		
Bank of Austin ^a			7,705.71	1,354.88	9,599,500.66	9,599,500.68
Bell Telephone Company of Nevada ^b	59.55	7,827.62	7,705.71	1,554.22		
Bridgerport Telephone and Telegraph Company			220.00	400.00		
Churchill County Telephone and Telegraph System			3,241.25	3,749.90		
Consolidated Power and Telephone Company			1,084.91	1,249.22		
Elko County Telephone and Telegraph Company	6,168.17	2,706.77	5,256.09	4,522.60		
Golconda Telephone and Power Company	421.00	1,332.49	5,798.97	2,888.17	3,862.40	3,942.40
Interstate Telephone Company		16,922.08		21,451.48	2,040.00	3,888.00
Nevada, California and Oregon Telephone and Telegraph Co. ^c	380.43	1,049.64	2,573.70	2,923.82		
Nevada Consolidated Telephone and Telegraph Company				2,055.43		1,562.50
Nevada Northern Railway Telegraph Department			6,454.10	6,462.64		
Nevada Telephone-Telegraph Company	6,968.40	2,245.07	19,614.33	4,951.79	13,287.51	22,145.86
Postal Telegraph Cable Company	442.56	986.00	7,349.61	9,298.64		
Searchlight and Western Telephone Company ^d			327.62	56.80		
The United Farmers Telephone and Telegraph Company			231.96	376.11		
Utah, Nevada and Idaho Telephone Company						
Western Union Telegraph Company	5,606,880.20	5,026,086.97	3,126,279.78	3,702,554.09	2,992,166.25	3,490,564.00
White Pine Telephone Company	1,108.78	1,463.43	7,235.11	5,871.66	6,800.80	5,300.80
Yerington Electric Company			335.56	261.04		
Totals	\$6,773,715.06	\$6,252,433.18	\$19,651,572.76	\$18,282,938.13	\$15,194,439.62	\$15,223,908.23

^aThe Bank of Austin is the owner and operator of the Austin-Manhattan Telephone Company.^bFormerly operating in the State of Nevada under the name of the Pacific Telephone and Telegraph Company.^cFormerly operating under the name of the California and Oregon Telegraph Company.^dCompany discontinued during the fiscal year ending June 30, 1914.*Italic figures denote deficit.*

**DIRECTORS AND OFFICERS OF EXPRESS, ELECTRIC-RAILWAY, CAR,
AND TELEPHONE COMPANIES****American Express Company**

Directors—James C. Fargo, New York, N. Y.; Francis F. Flagg, New York, N. Y.; Charles M. Pratt, New York, N. Y.; John H. Bradley, New York, N. Y.; Cornelius Vanderbilt, New York, N. Y.; J. Horace Harding, New York, N. Y.; J. G. Milburn, New York, N. Y.; J. S. Alexander, New York, N. Y.; George C. Taylor, New York, N. Y.

Officers—President, George C. Taylor, New York, N. Y.; First Vice-President, Francis F. Flagg, New York, N. Y.; Secretary, William C. Fargo, New York, N. Y.; Vice-President and Treasurer, James F. Fargo, New York, N. Y.; General Counsel, Carter, Ledyard & Milburn, New York, N. Y.; Comptroller, William E. Powelson, New York, N. Y.; Vice-President and General Manager Eastern Department, Henry S. Julier, New York, N. Y.; Vice-President and General Manager Western Department, G. A. D. Vickers, Chicago, Ill.; Manager of Foreign Department, United States and Canada, Marcellus F. Berry, New York, N. Y.; Director-General of Foreign Department, Europe, William S. Dalliba, Paris, France; Manager Department of Equipment and Supplies, Elisha Flagg, New York, N. Y.; Vice-President and General Traffic Manager, John H. Bradley, New York, N. Y.; Assistant General Traffic Manager, Edwin E. Bush, New York, N. Y.

The Globe Express Company

Directors—Geo. J. Gould, New York, N. Y.; E. T. Jeffery, New York, N. Y.; Kingdon Gould, New York, N. Y.; J. F. Vaile, Denver, Colo.; Jesse White, New York, N. Y.; Jay Gould, New York, N. Y.; J. B. Andrews, Denver, Colo.

Officers—President, E. T. Jeffery, New York, N. Y.; First Vice-President, Kingdon Gould, New York, N. Y.; Secretary, J. B. Andrews, Denver, Colo.; Treasurer, R. F. Watkins, Denver, Colo.; General Counsel, J. F. Vaile, Denver, Colo.; Auditor, L. C. Keller, Denver, Colo.; General Manager, D. D. Mayo, Denver, Colo.

Wells, Fargo & Company

Directors—B. D. Caldwell, F. D. Underwood, C. A. Peabody, H. W. de Forest, R. Delafield, P. A. Warburg, W. D. S. Thorne, W. Mahl, L. F. Loree, H. E. Huntington, all of New York, N. Y.; E. A. Stedman, Chicago, Ill.; A. Christeson and W. F. Herrin, of San Francisco, Cal.

Officers—President, B. D. Caldwell, New York, N. Y.; Vice-President, A. Christeson, San Francisco, Cal.; Vice-President, E. A. Stedman, Chicago, Ill.; Secretary, C. H. Gardiner, New York, N. Y.; Treasurer, B. H. River, New York, N. Y.; General Counsel, C. W. Stockton, New York, N. Y.; Vice-President and Comptroller, J. W. Newlean, Chicago, Ill.; Assistant Comptroller, B. Burr, Chicago, Ill.; General Manager, A. Christeson, San Francisco, Cal.; General Manager, E. A. Stedman, Chicago, Ill.; Vice-President in Charge of Traffic, F. S. Holbrook, New York, N. Y.; Traffic Manager, G. S. Lee, New York, N. Y.; Efficiency Engineer, C. B. Martin, New York, N. Y.

Nevada Interurban Railway Company

Directors—L. W. Berrum, J. M. Short, Geo. W. Perkins, S. H. Rosenthal, C. H. Duborg, of Reno, Nevada.

Officers—President, L. W. Berrum; First Vice-President, J. M. Short; Secre-

tary, S. H. Rosenthal; Treasurer, W. A. Harris; General Manager and General Superintendent, L. W. Berrum, all of Reno, Nevada.

Reno Traction Company

Directors—H. Fleishacker, Joseph Martin, John A. Buck, M. Fleishacker, William Matson, Wellington Gregg, Jr., all of San Francisco, Cal.; Alden Anderson, Sacramento, Cal.

Officers—Chairman of the Board and President, H. Fleishacker; First Vice-President, John A. Buck; Second Vice-President, R. E. Wallace; Secretary, Joseph Martin; Treasurer, M. Fleishacker; General Counsel, S. C. Scheeline; Auditor, A. N. Baldwin; General Manager, Geo. W. Hark, all of San Francisco, Cal.

The Pullman Company

Directors—Robert T. Lincoln, John J. Mitchell, Norman B. Ream, Chauncey Keep, William K. Vanderbilt, George F. Baker, Frederick W. Vanderbilt, John S. Runnells, W. Seward Webb, Frank O. Lowden, J. P. Morgan. Addresses not shown.

Officers—Chairman of the Board, Robert T. Lincoln, Chicago, Ill.; President, John S. Runnells, Chicago, Ill.; Secretary, A. S. Weinsheimer, Chicago, Ill.; Treasurer, L. S. Taylor, Chicago, Ill.

Bank of Austin

(Owner and Operator of the Austin-Manhattan Telephone Company)

Officers—President, J. A. Miller, Austin, Nevada; Cashier, Henry B. Carter, Austin, Nevada.

Bell Telephone Company of Nevada

Directors—F. W. Eaton, San Francisco, Cal.; G. E. McFarland, San Francisco, Cal.; H. T. Scott, San Francisco, Cal.

Officers—President, G. E. McFarland; Vice-President, H. T. Scott; Secretary and Treasurer, F. W. Eaton; General Auditor, F. C. Phelps; General Manager, J. C. Nowell, all of San Francisco, Cal.

Bridgeport Telephone and Telegraph Company

Sole owner—A. S. Bryant, Bridgeport, Cal.

Churchill County Telephone and Telegraph System

Officers—County Commissioners C. P. Cirac, A. C. Burton, Geo. Ernst; Manager, G. B. McFarlin, all of Fallon, Nevada.

Consolidated Power and Telephone Company

Directors—F. A. Clark, Ed. W. Clark, J. S. Park, W. S. Park, all of Las Vegas, Nevada.

Officers—President, F. A. Clark; Secretary and Treasurer, John S. Park; Manager, W. S. Park, all of Las Vegas, Nevada.

Elko County Telephone and Telegraph Company

Directors—W. T. Smith, A. W. Hesson, C. B. Henderson, C. H. Prentice, of Elko, Nevada; J. J. Hylton, Skelton, Nevada.

Officers—President, W. T. Smith; Vice-President, A. W. Hesson; Secretary, C. H. Prentice; Treasurer, Henderson Banking Company, all of Elko, Nevada.

Golconda Telephone and Power Company

Directors—Wm. Kent, Kentfield, Cal.; Jno. E. Webb, Kentfield, Cal.; John G. Taylor, Lovelock, Nevada; Harry Petrie, Golconda, Nevada; Stewart G. Mollin, Golconda, Nevada.

Officers—President, Jno. E. Webb, Kentfield, Cal.; Secretary and Treasurer, Stewart G. Mollin, Golconda, Nevada; Superintendent, C. B. Welshons, Winnemucca, Nevada.

Interstate Telegraph Company

Directors—William E. Porter, Denver, Colo.; Lawrence C. Phipps, Jr., Denver, Colo.; Fred M. Hess, Bishop, Cal.; Arthur B. West, Riverside, Cal.; Delos A. Chappell, Riverside, Cal.

Officers—President, Delos A. Chappell, Riverside, Cal.; Vice-President, Arthur B. West, Riverside, Cal.; Vice-President and General Manager, Fred M. Hess, Bishop, Cal.; Secretary, W. E. Porter, Denver, Colo.; Treasurer, L. C. Phipps, Jr., Denver, Colo.; General Counsel, I. V. Potter, Riverside, Cal.; Auditor, P. R. Ferguson, Riverside, Cal.

Nevada, California and Oregon Telegraph and Telephone Company

Directors—Scott Hendricks, W. E. Hills, Samuel Spring, A. A. Rosenshine, all of San Francisco, Cal.; A. J. Mathews, Susanville, Cal.

Officers—President and General Manager, Scott Hendricks, San Francisco, Cal.; Secretary and Treasurer, W. E. Hills, San Francisco, Cal.; Vice-President, A. J. Mathews, Susanville, Cal.

Nevada Consolidated Telephone and Telegraph Company

Directors—Alfred Karge, Mrs. J. G. Sweeney, J. G. Sweeney, all of Carson City, Nevada.

Officers—President and General Manager, Alfred Karge; Vice-President, Mrs. J. G. Sweeney; Secretary and Treasurer, J. G. Sweeney, all of Carson City, Nevada.

Nevada Northern Railway Company Telegraph Line

Directors and Officers—See Nevada Northern Railway Annual Reports.

Nevada Telephone-Telegraph Company

Directors—Geo. Wingfield, Reno, Nevada; John M. Gregory, J. M. Gilfoyle, W. R. Williams, W. J. Douglass, F. G. Waterhouse, all of Tonopah, Nevada; W. L. Rennie, Sacramento, Cal.

Officers—President, Geo. Wingfield, Reno, Nevada; Vice-President, F. G. Waterhouse, Tonopah, Nevada; Treasurer, J. M. Gilfoyle, Tonopah, Nevada; Secretary, E. S. LaTourrette, Tonopah, Nevada; General Manager, F. G. Waterhouse, Tonopah, Nevada.

Northern Nevada Telephone Company

Directors—A. W. Sewell, Tuscarora, Nevada; Oscar Miller, J. L. Winter, White Rock, Nevada.

Officers—President, A. W. Sewell, Tuscarora, Nevada; Vice-President, Philip Snyder; Secretary, K. M. Sewell.

Postal Telegraph Cable Company

Directors—Clarence H. Mackay, Edward Reynolds, Charles C. Adams, Charles P. Bruch, all of New York, N. Y.

Officers—President, Clarence H. Mackay; Vice-President and General Manager, Edward Reynolds; Second Vice-President, Charles C. Adams; Third Vice-President, Charles P. Bruch; Treasurer, Joseph J. Cardona; Secretary, William B. Dunn, all of New York, N. Y.

Searchlight and Western Telephone Company

Sole Owner—James Cashman, Searchlight, Nevada.

The United Farmers Telephone and Telegraph Company

Directors—E. Christensen, Gardnerville, Nevada; Fritz Schacht, Genoa, Nevada; J. H. Wood, Minden, Nevada; R. W. Bassman, Sheridan, Nevada; E. J. Phillips, Gardnerville, Nevada.

Officers—President, E. Christensen, Gardnerville, Nevada; Vice-President, Fritz Schacht, Genoa, Nevada; Treasurer, J. H. Wood, Minden, Nevada; Secretary and General Manager, E. J. Phillips, Gardnerville, Nevada.

Utah, Nevada and Idaho Telephone Company

Directors—J. F. Judge, H. H. Hempstead, H. L. Thomas, A. C. Ellis, Jr., of Salt Lake City, Utah; W. C. Baber, Sr., of McDermitt, Nevada; R. L. Douglass, of Fallon, Nevada.

Officers—President, J. F. Judge; Secretary and Treasurer, H. H. Hempstead; Superintendent, H. L. Thomas, all of Salt Lake City, Utah.

Western Union Telegraph Company

Directors—William Vincent Astor, Newcomb Carlton, Robert Clowry, Henry P. Davison, Henry W. de Forest, Chauncey M. Depew, William Fahnestock, Edwin Gould, George J. Gould, Thomas H. Hubbard, Robert S. Lovett, Edwin G. Merrill, Percy A. Rockefeller, Jacob H. Schiff, Mortimer L. Schiff, Joseph J. Slocum, James Stillman, William H. Truesdale, Albert H. Wiggin, all of New York, N. Y.; Oliver Ames, Boston, Mass.; Henry A. Bishop, Bridgeport, Conn.

Officers—President, Newcomb Carlton; Vice-President, G. W. E. Atkins; Vice-President, B. Brooks; Secretary, William H. Baker; Treasurer, A. B. Brewer; Comptroller, E. Y. Gallaher; Auditor, H. W. Ladd; General Counsel, Rush Taggart; General Attorney, George H. Fearons, all of New York, N. Y.; General Manager, Nevada, C. H. Gaunt, San Francisco, Cal.

White Pine Telephone Company

Directors—Chas. A. Walker, Arthur Smith, J. W. Biggane, all of Ely, Nevada,

Officers—President, Chas. A. Walker; Vice-President, Arthur Smith; Secretary and Treasurer, J. W. Biggane; Manager, J. S. Bennett, all of Ely, Nevada.

Yerington Electric Company

Directors—None.

Officers—President, J. I. Wilson; Treasurer, C. W. Gallagher; Secretary, E. B. Lam; General Manager, Geo. Plummer, all of Yerington, Nevada.

**ACCIDENT REPORT OF RAILROADS OPERATING IN NEVADA
FOR THE YEAR ENDING DECEMBER 31, 1914, AND
STATEMENT OF EXPENSES OF THE NEVADA RAILROAD
COMMISSION FOR THE YEAR 1914.**

**ACCIDENTS RESULTING IN THE DEATH OR INJURY OF PERSONS ON ALL RAILROADS OPERATING IN NEVADA
DURING THE YEAR 1914**

Nature of accident	Passengers		Trainmen		Trainmen in yards		Switching crews		Other yardmen		Other employees		Trespassers		Total	
	K.		I.		K.		I.		K.		I.		K.		K.	
Caught between cars.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Collisions.....	0	4	0	5	0	0	0	0	0	0	0	0	0	0	1	12
Derailments.....	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4
Explosions and burns.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4
Falling from trains.....	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	19
Getting on or off standing trains.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
Handling traffic.....	0	0	0	2	0	2	0	2	0	0	0	0	0	0	0	17
Jumping on or off trains.....	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	8
Overhead structures.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Overseeing cars.....	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Propping of cars.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Shocking.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Struck by trains.....	0	1	0	0	0	0	0	0	0	0	102	0	0	0	0	102
Sudden stopping of trains.....	0	2	0	2	0	2	0	0	0	0	3	0	0	0	4	9
Track work.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Tie work.....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Uncoupling cars.....	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	14
Other causes.....	0	7	0	5	0	5	0	0	0	0	0	0	0	0	0	1
Totals.....	0	18	0	19	2	16	0	5	0	1	4	178	16	22	22	259

K., killed. I., injured.

GENERAL EXPENSES OF THE RAILROAD COMMISSION OF NEVADA
FOR THE ELEVEN-MONTH PERIOD BEGINNING JANUARY 1, 1914,
AND ENDING NOVEMBER 30, 1914.

Rent.....	\$330.00
Traveling expenses.....	1,729.70
Typewriters.....	141.25
Stamps and postoffice-box rent.....	215.23
Express charges.....	13.60
Fuel.....	74.60
Drayage.....	2.75
Janitor supplies.....	13.60
Telegraph service.....	95.52
Electric-light service.....	20.55
Outside stenographic fees.....	168.75
Paper and envelopes.....	153.45
Other stationery.....	121.79
Books and periodicals.....	80.50
Telephone service.....	73.70
Typewriter repairs and supplies.....	44.73
Tax and National Railway Association expenses.....	35.00
Office stenographers.....	3,743.20
Janitor service.....	330.00
Advertising.....	265.10
Freight.....	2.84
Bookbinding.....	38.25
Furniture.....	55.75
Water service.....	9.00
Printing.....	89.60
Outside clerical help.....	61.00
Miscellaneous.....	59.50
Total.....	<u>\$7,968.96</u>

**LIST OF AUTHORITIES ISSUED BY THE RAILROAD COMMISSION OF
NEVADA GRANTING RAILROADS AND OTHER COMPANIES THE
PRIVILEGE OF REDUCING RATES ON LESS THAN THE STATU-
TORY NOTICE OF THIRTY DAYS. COMMENCING WITH JANUARY
1, 1914, AND ENDING DECEMBER 31, 1914.**

AUTHORIZATIONS

Authority No. 315—Las Vegas and Tonopah Railroad Company, applicant. Requesting authority to publish rate of 20 cents per cwt. on second-hand corrugated iron, carloads, minimum weight 30,000 pounds, to apply from Rhyolite to Las Vegas, Nevada, making same effective on one day's notice. Application received January 8, 1914, granted January 9, 1914.

Authority No. 316—Southern Pacific Company, applicant. Requesting permission to reissue its special joint freight tariff No. 1600-A, N. R. C. No. 81, naming rates on railroad ties and rough timbers in carload lots, from Verdi and intermediate points, to Goldfield, Nevada, and intermediate points, so as to include mining wedges with the commodities already shown, making such reissue effective on one day's notice. Application received January 8, 1914, granted January 9, 1914.

Authority No. 317—Tonopah and Goldfield Railroad Company, applicant. Asking for authority to publish rate of \$1.25 per train-mile, in addition to regular carload freight charges on shipments handled by special train service in transportation of freight from Goldfield to Tonopah, Nevada, making same effective January 9, 1914. Application received January 10, 1914, and granted on the same day.

Authority No. 318—Southern Pacific Company, applicant. Requesting permission to extend effective date of item 11-1, on second revised page 8, of its local freight tariff No. 90-A, N. R. C. No. 96, to March 1, 1914. Application received January 13, 1914, granted the same day. The granting of this authority had the effect of postponing the effective date of proposed increased minimum charges for freight in less-than-carload lots moving between points in the State of Nevada, an investigation of which was being made by the Commission under Case No. 273.

Authority No. 319—Las Vegas and Tonopah Railroad Company, applicant. Requesting authority to publish and make effective on one day's notice, joint rate of \$7.50 per ton on lime in carload lots, minimum weight 40,000 pounds, to apply from Sloan, Nevada, on the San Pedro, Los Angeles and Salt Lake Railroad, to Tonopah, Nevada, on the Tonopah and Goldfield Railroad. Application received January 13, 1914, and granted the same day.

Authority No. 320—Western Pacific Railway Company, applicant. Asking permission to amend rule 4-C, in supplement 21 to its tariff N. R. C. No. 36, so as to make same effective March 1, 1914. Application received January 14, 1914, and granted the same day. This authority covers the same subject as that covered in authority No. 318.

Authority No. 321—Mason Valley Telephone and Telegraph Company, applicant. Requesting authority to publish and make effective on one day's notice, certain long-distance toll rates between Dayton, Mason City, Thompson, Towle Station, Wabuska, and Yerington, Nevada, all such rates being reductions. Application received February 4, 1914, and granted the same day.

Authority No. 322—Nevada Northern Railway Company, applicant. Asking permission to amend its local freight tariff No. 24-C, N. R. C. No. 10, so as to correct error in rate quoted in supplement 1 thereof applicable on black powder in carload lots, from Cobre and Shafter to Lane, Keystone, Copper Flat, Star Pointer, Kimberly, and Veteran, Nevada, making same effective January 25, 1914. Authority granted February 11, 1914.

Authority No. 323—San Pedro, Los Angeles and Salt Lake Railroad Company, applicant. Requesting permission to publish and make effective on one day's notice, rate of 35 cents per ton, minimum carload weight 40,000 pounds, on gravel from Pierce to Las Vegas, Nevada. Application received February 13, 1914, granted February 14, 1914.

Authority No. 324—Official Express Classification Committee, applicant. Asking permission to publish and make effective April 10, 1914, supplement No. 1 to official express classification No. 22, N. R. C. No. 4, covering reductions in classifications governing the transportation of express matter moving between points in Nevada. Application received March 15, 1914, granted March 26, 1914.

Authority No. 325—Southern Pacific Company, applicant. Requesting permission to publish and make effective on one day's notice rate of \$20 per single-deck car of sheep moving from Winnemucca to Palisade, Nevada. Application received April 2, 1914, and granted the same day.

Authority No. 326—Western Pacific Railway Company, applicant. Asking permission to publish and make effective immediately, rate of \$20 per single-deck car, minimum fifteen carloads, on sheep from Winnemucca to Palisade, Nevada. Application received April 4, 1914, and rate authority granted the same day. The application for authority to apply a minimum of fifteen cars was denied.

Authority No. 327—Southern Pacific Company, applicant. Requesting permission to publish and make effective on one day's notice, the following rates on hay in carload lots:

From Fernley, Argo, and Fallon to Verdi.....	\$1.80 per ton
From Fernley, Argo, and Fallon to Lovelock.....	2.00 per ton
From Fernley, Argo, and Fallon to Nenzel.....	2.80 per ton
From Fernley, Argo, and Fallon to Winnemucca.....	3.00 per ton
From Fernley, Argo, and Fallon to Elko.....	3.50 per ton

Application received April 9, 1914, granted April 10, 1914.

Authority No. 328—Western Pacific Railway Company, applicant. Permission asked for authority to publish and make effective at once, certain reduced mileage rates to cover the transportation of water, in tank cars, minimum carload full gallonage capacity of cars furnished, the charges not to include the cost of water. Application received April 10, 1914, and granted the same day.

Authority No. 329—Tonopah and Goldfield Railroad Company, applicant. Requesting permission to publish and make effective April 14, 1914, excursion fare of \$2 for the round trip, Tonopah to Goldfield, Nevada, and return, on account of boxing contest taking place at Goldfield. Application received April 13, 1914, and granted the same day.

Authority No. 330—Bell Telephone Company of Nevada, applicant. Permission requested to publish and make effective at once, certain long-

distance toll rates between Fernley and other points in Nevada on account of establishing new toll station at that point. Application received April 15, 1914, granted April 17, 1914.

Authority No. 331—Southern Pacific Company, applicant. Requesting authority to publish and make effective on one day's notice, numerous reductions in rates to apply on fresh meat, cheese, butter, and eggs in less-than-carload lots, from Reno to various main-line Southern Pacific points in Nevada. Application received April 18, 1914, granted April 21, 1914.

Authority No. 332—Southern Pacific Company, applicant. Requesting authority to publish and make effective on one day's notice, rate of \$200 to cover the transportation of narrow-gage locomotives from Golconda to Sparks, Nevada, and from Sparks to Nenzel, Nevada, the rate to cover the entire movement. Application received April 18, 1914, granted April 21, 1914.

Authority No. 333—Pacific Freight Tariff Bureau, applicant. Permission sought to amend applicant's tariff N. R. C. No. 41, by establishing the following rule:

(Applies on intrastate traffic within Nevada only, and must not be used to make through rates on interstate traffic.)

Whenever a class rate and a commodity rate are named between specified points, the lower of such rate is the lawful rate unless some combination of class rates or of commodity rates, or of class and commodity rates, makes a lower through rate.

Application received April 22, 1914, granted April 24, 1914.

Authority No. 334—Nevada Transportation Company, applicant. Requesting permission to publish and make effective May 1, 1914, rate of \$1.05 per ton on ore in carload lots from Raines Station to Palisade, Nevada. Application received April 28, 1914, granted May 1, 1914.

Authority No. 335—Nevada Transportation Company, applicant. Requesting permission to apply carload rate on ten tons of coal moving from Palisade to Eureka, Nevada, on account of shortage of fuel in Eureka. Application received May 2, 1914, and granted the same day.

Authority No. 336—Virginia and Truckee Railway, applicant. Requesting permission to publish and make effective May 19, 1914, rate of \$1.20 per ton of 2,000 pounds on sand, minimum carload weight 24,000 pounds, from Sand Cut to Anderson, Nevada, embodying in the tariff an additional charge of 40 cents per ton to cover the cost of the commodity and labor. Application received May 18, 1914, and granted the same day.

Authority No. 337—Tonopah and Goldfield Railroad Company, applicant. Requesting authority to name, in conjunction with the Las Vegas and Tonopah Railroad Company, a joint rate of \$11.05 per ton to apply on second-hand quartz mill and appurtenances, in carload lots from Original to Mina, Nevada, making same effective retroactive to May 25, 1914. Application received May 28, 1914, and granted the same day.

Authority No. 338—Virginia and Truckee Railway, applicant. Requesting permission to publish and make effective May 29, 1914, excursion fares between all points on its road of one fare for the round trip on account of Decoration Day. Application received May 28, 1914, and granted the same day.

Authority No. 339—Las Vegas and Tonopah Railroad Company, applicant. Requesting permission to publish and make effective June 5, 1914, switching rate of \$15 per car to cover the movement of ore from the Jumbo Extension Mining Company to the Goldfield Consolidated Mill. Application received May 30, 1914, and granted June 1, 1914.

Authority No. 340—Southern Pacific Company, applicant. Requesting authority to publish and make effective on one day's notice joint rate, in conjunction with the Tonopah and Goldfield Railroad Company, of \$4.25 per ton applicable on scrap iron in carload lots, Schurz to Tonopah, Nevada. Application received June 3, 1914, granted the same day. This rate was published as a result of Case No. 298, heretofore referred to.

Authority No. 341—Tonopah and Goldfield Railroad Company, applicant. Requesting permission to publish and make effective immediately excursion fare of \$2 for the round trip, Tonopah to Goldfield, Nevada, and return, on account of public funeral. Application received June 10, 1914, and granted the same day.

Authority No. 342—Wells, Fargo & Company Express, applicant. Permission asked to publish and make effective on one day's notice, rate of \$2.03 per cwt. on ice-cream, any quantity, from Elko to Winnemucca, Nevada. Application received June 22, 1914, and granted the same day.

Authority No. 343—Wells, Fargo & Company Express, and Official Express Classification Committee, applicants. Requesting permission to publish and make effective on or after July 1, 1914, complete revision of rates and classifications for the transportation of express between points in the State of Nevada on the lines of Wells, Fargo & Company Express, the American Express Company, and the Globe Express Company, the new rates amounting to a general reduction of approximately 15 per cent. Application received June 22, 1914, and granted the same day.

Authority No. 344—Southern Pacific Company, applicant. Requesting permission to publish and make effective at once, rate of \$3 per ton, minimum carload weight capacity of car, on second-hand rails, Golconda to Nenzel, Nevada. Application received July 7, 1914, and granted the same day.

Authority No. 345—Las Vegas and Tonopah Railroad Company, applicant. Permission requested to cancel various local and joint freight and passenger tariffs, and also to reissue others, making such cancelations and reissues effective on one day's notice. This authority was asked on account of the consolidation of the Bullfrog-Goldfield and Las Vegas and Tonopah Railroad Companies. Application received July 8, 1914, and granted the same date, provided that the changes did not result in any increased rates.

Authority No. 346—Nevada Copper Belt Railroad Company, applicant. Requesting authority to publish and make effective immediately, rate of 20 cents per ton of 2,000 pounds, on rock for road-building purposes, minimum carload weight 60,000 pounds, Mason to Wabuska, Nevada. Application received July 10, 1914, and granted the same day.

Authority No. 347—Virginia and Truckee Railway, applicant. Requesting permission to publish and make effective July 15, 1914, a twenty-ride commutation fare of \$7 between Carson City and Santiago (a point located two and five-tenths miles west of Mound House). Application received July 13, 1914, and granted the same date.

Authority No. 348—Southern Pacific Company, applicant. Requesting permission to publish and make effective on one day's notice, rate of \$2 per ton of 2,000 pounds on second-hand ties, minimum space capacity of car, Golconda to Nenzel, Nevada. Application received July 31, 1914, and granted the same date.

Authority No. 349—Nevada Northern Railway Company, applicant. Requesting authority to extend limit on commutation tickets to sixty days on tickets sold between East Ely, Ely Mines, and McGill, Nevada, making same effective retroactive to August 1, 1914. Application received August 10, 1914, and granted the same day.

Authority No. 350—Las Vegas and Tonopah Railroad Company, applicant. Requesting permission to publish and make effective on one day's notice, rate of \$1 per ton, minimum carload weight 60,000 pounds, on manure, Goldfield to Las Vegas, Nevada. Application received September 4, 1914, and granted on same day.

Authority No. 351—Las Vegas and Tonopah Railroad Company, applicant. Permission requested to publish and make effective on one day's notice, rate of \$10 per car to apply on water shipped in tank cars, from Beatty, Amargosa, Indian Spring, and Corn Creek to Charleston, Nevada. Application received September 9, 1914, and granted on the same day.

Authority No. 352—Las Vegas and Tonopah Railroad Company, applicant. Requesting permission to publish and make effective at once, joint rate of \$7.50 per ton, in conjunction with the San Pedro, Los Angeles and Salt Lake Railroad Company and Tonopah and Goldfield Railroad Company on lime, minimum carload weight 40,000 pounds, Sloan to Millers, Nevada. Application received September 14, 1914, granted September 15, 1914.

Authority No. 353—Southern Pacific Company, applicant. Requesting permission to publish and make effective retroactive to September 1, 1914, supplement to G. F. D. circular No. 229, providing for shipments of live stock, but not including race horses, sulkies, and saddle harness, for exhibition at the Fallon Fair. Application received September 16, 1914, granted September 17, 1914.

Authority No. 354—Virginia and Truckee Railway, applicant. Permission sought to publish and make effective September 22, 1914, excursion rate of one fare for the round trip from all stations on applicant's road to Carson City, Nevada, and return, on account of state convention of political parties. Application received September 21, 1914, and granted the same day.

Authority No. 355—Western Pacific Railway Company, applicant. Requesting permission to publish and make effective on one day's notice, rate of \$75 per 36-foot double-deck car on sheep, Gerlach to Tobar, Nevada. Application received September 24, 1914, and granted the same day.

Authority No. 356—Bell Telephone Company of Nevada, applicant.

Requesting authority to publish and make effective at once, joint telephone toll rates in conjunction with the Elko County Telephone and Telegraph Company, between Elko, Nevada, and various points on applicant's system in this State. Application received September 27, 1914, granted September 28, 1914.

Authority No. 357—Bullfrog-Goldfield Railroad Company, applicant. Requesting permission to publish and make effective on one day's notice, joint rate in conjunction with the Tonopah and Goldfield Railroad Company, rate of \$6 per ton, minimum carload weight 30,000 pounds, on second-hand quartz mill and appurtenances, from Original to Tonopah, Nevada. Application received October 4, 1914, granted October 5, 1914.

Authority No. 358—Tonopah and Goldfield Railroad Company, applicant. Permission requested to publish and make effective October 6, 1914, excursion fare of \$2 for the round trip, Tonopah to Goldfield, Nevada, and return, account Moose Lodge meeting. Application received October 5, 1914, and granted the same day.

Authority No. 359—Bullfrog-Goldfield Railroad Company, applicant. Requesting authority to publish and make effective on one day's notice, rate of \$1 per ton on second-hand rails, angles, frogs, switches, and ties, from Goldfield, Springdale, Rhyolite, and intermediate points to Las Vegas, Nevada. Application received October 12, 1914, granted October 13, 1914.

Authority No. 360—Bell Telephone Company of Nevada, applicant. Requesting permission to publish and make effective on less than statutory notice, joint telephone toll rates in conjunction with the Elko County Telephone and Telegraph Company, between Elko and other points in the State of Nevada. Application received October 18, 1914, granted October 19, 1914.

Authority No. 361—Bullfrog-Goldfield Railroad Company, applicant. Requesting permission to publish and make effective on one day's notice, rate of 1 cent per ton per mile on second-hand galvanized iron, lumber, sash, and doors, any quantity, from Goldfield to Rhyolite, Nevada. Application received October 23, 1914, and granted the same day.

Authority No. 362—Southern Pacific Company, applicant. Permission requested to publish and make effective on one day's notice, rate of \$3.50 per ton, minimum carload weight 30,000 pounds, on plaster from Coin to Mound House, Nevada, such rate to expire thirty days from the effective date. Application received October 31, 1914, and granted the same date.

Authority No. 363—Bullfrog-Goldfield Railroad Company, applicant. Requesting authority to publish and make effective on one day's notice, rate of \$4 per ton, minimum carload weight 30,000 pounds, on second-hand quartz mill and appurtenances, from Original to Goldfield, Nevada. Application received November 1, 1914, granted November 2, 1914.

Authority No. 364—Intermountain Demurrage Bureau, applicant. Application sought to waive demurrage charges on tank cars used in the transportation of water to Millers, Nevada, until the situation

regarding the water supply at that point was remedied. Application received November 5, 1914, granted November 6, 1914.

Authority No. 365—Nevada Northern Railway Company, applicant. Requesting permission to discontinue Sunday passenger train service between Cobre and Ely, Nevada, owing to falling off in passenger traffic between the points named. Application received November 10, 1914, denied the same day. A hearing was held with respect to this matter on November 19, 1914, and the Nevada Northern Railway Company agreed to maintain the Sunday passenger train service until after the close of the year.

Authority No. 366—Southern Pacific Company, applicant. Requesting permission to establish the following rule relative to the sale of passenger fare tickets between various points in Nevada, and making same effective on one day's notice:

Tickets covering passage between Mound House and Dayton, Nevada, on the one hand; and Hawes, Nevada, and points beyond, on the other hand; via Churchill; may be honored via Wabuska, Nevada.

Application received November 22, 1914, granted November 23, 1914.

Authority No. 367—Bell Telephone Company of Nevada, applicant. Requesting permission to publish and make effective on one day's notice, joint telephone toll rates in conjunction with the Utah, Nevada and Idaho Telephone Company, between a large number of points in the State of Nevada. Application received November 24, 1914, and granted the same date with the understanding that no rates were increased.

Authority No. 368—Utah, Nevada and Idaho Telephone Company, applicant. Requesting authority to adopt schedules, and be made a party thereto, as filed by the Bell Telephone Company under authority No. 367. Application received November 25, 1914, granted November 27, 1914.

Authority No. 369—Southern Pacific Company, applicant. Requesting permission to publish and make effective immediately, rate of \$3.50 per ton, Fallon to Wells, Nevada, and \$4 per ton Fallon to Wells, Nevada, on hay in carload lots. Application received November 27, 1914, and granted the same day.

Authority No. 370—Nevada Transportation Company, applicant. Requesting authority to publish and make effective December 18, 1914, rate of 45 cents per cwt. in carloads, and rate of 50 cents per cwt. in less than carloads, on potatoes from Palisade to Eureka, Nevada. Application received December 16, 1914, and granted the same day.

Authority No. 371—Southern Pacific Company, applicant. Requesting permission to reestablish on one day's notice, rate of \$1.40 per cord on fuel wood, in carload lots, Verdi to Fallon, Nevada. Application received December 22, 1914, and granted the same date.

Authority No. 372—Virginia and Truckee Railway, applicant. Permission sought to publish the following rates to apply on ten-ride commutation tickets, to become effective January 18, 1915:

Between Carson City and Reno, Nevada.....	\$6.25
Between Carson City and Virginia City, Nevada.....	5.00
Between Carson City and Minden, Nevada.....	4.00

Application received December 31, 1914, and granted the same day.

**ADMINISTRATIVE, TARIFF, ACCOUNTING AND GENERAL
RULINGS OF THE RAILROAD COMMISSION OF NEVADA,
RAILROAD COMMISSION LAW, RULES OF PRACTICE, AND
FORMS.**

ADMINISTRATIVE RULINGS

March 9, 1914—A letter was received from J. M. Hiskey, Superintendent of the Nevada Central Railroad Company asking whether the Nevada Short Line Railway Company was operating as a common carrier, in order that he might know whether it would be legal to issue free transportation to the officials of that company.

The Commission advised that the Nevada Short Line Railway Company had declared its intention of operating as a common carrier, and was at that time preparing tariffs, both freight and passenger, to be filed with the Commission, but had not been operated as a common carrier up to that time. It was therefore ruled that the officials of the Nevada Short Line Railway Company could not be legally given free transportation.

May 3, 1914—In reply to an inquiry received from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, a ruling was made to the effect that the officials of the Nevada Short Line Railway Company could legally be given free or reduced-rate transportation, as that road had commenced operating as a common carrier April 10, 1914.

June 3, 1914—Inquiry received from C. E. Redman, Traffic Manager of the Las Vegas and Tonopah Railroad Company, asking whether second-hand lumber shipped from Goldfield to Las Vegas, Nevada, for his own personal use, could be legally carried free of charge by the Las Vegas and Tonopah Railroad Company.

Held, That freight of such character as lumber could not be legally carried free of charge for an employee of any railroad company.

June 10, 1914—Inquiry received from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, asking whether free transportation could legally be given to culturists in the employ of the Nevada Fish Commission.

Held, That such free transportation could legally be issued under the terms of subdivision a, section 8, of the Railroad Commission Law.

June 26, 1914—A letter was received from I. H. Kent, President of the Churchill County Chamber of Commerce of Fallon, Nevada, asking whether it would be legal for railroad companies operating in the State of Nevada to grant free or reduced-rate transportation to secretaries of chambers of commerce.

Held, That it would be illegal for carriers to issue such free or reduced-rate transportation.

July 11, 1914—Inquiry from L. G. Cannon, General Manager of the Nevada Northern Railway Company, asking if it would be legal for his company to issue free transportation to representatives of the Railway Educational Association while working on that road.

Held, That it would be legal to issue such free transportation, the representatives referred to being employees of the company while working there.

August 17, 1914—Inquiry received from J. M. Hiskey, Superintendent of the Nevada Central Railroad Company, asking whether within the meaning of the Railroad Commission Law telephone companies were considered as railroads, and if so, would it be lawful to issue free transportation to employees of the Utah, Nevada and Idaho Telephone Company.

Held, That within the meaning of the Railroad Commission Law telephone companies are considered railroads, and that the Nevada Central Railroad Company could legally issue free transportation to employees of the Utah, Nevada and Idaho Telephone Company.

September 5, 1914—A letter was received from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, asking whether it would be lawful to issue free transportation to Ensign G. E. Guiry, a representative of the Salvation Army.

Held, That such free transportation could legally be issued.

August 1, 1914—A telegram was received from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, asking for authority under the Railroad Commission Law to transport Red Cross Society car and occupants between points on his road.

Such authority was granted by the Commission.

November 4, 1914—Inquiry from W. D. Forster, Traffic Manager of the Tonopah and Goldfield Railroad Company, asking whether it would be legal to issue free transportation to F. M. Manson, Assistant Traffic Manager of the Nevada Short Line Railroad Company.

Held, That such free transportation could legally be issued.

ACCOUNTING CIRCULAR No. 1

There being numerous complaints made to this Commission, informally, by shippers and consignees in the State of Nevada, respecting the rendering of freight bills, by several railroads operating in the State of Nevada, the freight bills referred to showing, in some instances, the point of origin of shipment, destination, character of goods, weight, and charges, but eliminating the rates upon which charges are assessed; and in other instances showing advanced charges and eliminating advanced charged rates, thus making it impossible for the average consignee to check his freight bills with any degree of accuracy, this Commission, after careful investigation of the matter, has deemed it advisable to make the following ruling to govern all railroads operating in the State of Nevada. It is, therefore,

Ordered: That all railroads operating in the State of Nevada, when rendering freight bills to consignees at the point of delivery of shipments, must show the rate assessed from point of origin to point of destination.

In all cases where freight bills carry advance charges, the rate or rates used in assessing the advanced charges must be shown, and also the rate or rates used in assessing the line charges, thus specifically naming the through rate.

This order is to take effect on September 1, 1909.

By order of the Commission:

E. H. WALKER, *Secretary*.

TARIFF RULING No. 1

Carriers may provide in their tariffs that limited passenger tickets may be extended in cases of the illness of the passenger holding such ticket.

Tariffs must give the title of the officer who shall have authority to give such extension, and such officer shall be required by the carrier to keep a memorandum of each instance in which such extension is given, and the date upon which it is allowed. Such information shall be subject at any time to be called for by the Commission. This rule must be applied strictly and in good faith, and upon the carrier is placed the responsibility of strict conformity thereto.

Only such illness as makes travel dangerous to health of the traveler will justify the extension herein provided for. The extension may also be granted to one or more members of the family of the passenger who is ill when traveling together and to persons who are subject to an established quarantine.

Stopover privileges for a limited time may be granted for the same causes and under the same conditions and restrictions as justify extension of time upon limited tickets. No stopover privilege will be recognized as valid unless provisions therefor are made in the carrier's published tariffs.

RAILROAD COMMISSION OF NEVADA,

ATTEST: E. H. WALKER, *Secretary*. H. F. BARTINE, *Chairman*.

Effective February 10, 1908.

TARIFF CIRCULAR No. 2A

To the Railroads Operating in Nevada:

Strictly excursion fares, covering a named and limited period, may be established on less than the regular thirty-day notice.

To avoid the necessity of special application in cases of this kind, the Commission has made a general order fixing the following-named time of notice of round-trip excursion fares, and carriers may govern themselves accordingly:

Fares for an excursion limited to a designated period of not more than three days may be established, without further notice, upon posting a tariff two days in advance in two public and conspicuous places in the waiting-room of each station where tickets for such excursions are sold, and mailing a copy thereof to the Commission.

Fares for an excursion limited to a designated period of more than three days and not more than thirty days may be established upon a like notice of five days.

Fares for a series of daily excursions, such series covering a period not exceeding thirty days, may be established upon a like notice of five days as to the entire series, and a separate notice of the excursion on each day covered by the series need not be given.

Fares for an excursion limited to a designated period exceeding thirty days will require the statutory notice, unless shorter time is allowed in special cases by the Commission.

RAILROAD COMMISSION OF NEVADA,

Issued June 19, 1908.

By E. H. WALKER, *Secretary*.

Effective June 19, 1908.

Tariff Circular No. 2 canceled.

TARIFF CIRCULAR No. 3

To the Railroads Operating in the State of Nevada:

Commencing immediately, all passenger and freight tariffs, circulars, excursion notices, or rate notices of any kind, and all supplements, or amendments to the same naming rates or fares affecting the intrastate business of your road within the State of Nevada, must be given a Nevada Railroad Commission number.

The first tariff issued after the receipt of this circular letter containing rates described above should be numbered one, and all tariffs issued thereafter to be numbered consecutively. The number must be preceded by the initials N. R. C., and the initials and number must be placed in either the upper right-hand corner of the tariff or the upper left-hand corner, and should be printed in bold type.

Where one issue supersedes another, reference of cancelation must be made beneath the N. R. C. number of the superseding tariff, showing the number of the tariff canceled. Where portions of other N. R. C. tariffs are canceled reference to the tariff or tariffs and rates canceled must be specified on the first page or title page of the canceling tariff, showing in detail just what items have been canceled.

Please acknowledge receipt of this circular letter by return mail, advising this Commission of your compliance to the same and also advising whether the matter is thoroughly understood.

RAILROAD COMMISSION OF NEVADA,

Issued May 26, 1909.

By E. H. WALKER, *Secretary*.

TARIFF RULING No. 4

Upon traffic picked up and laid down within the State of Nevada, by carrier or between carriers, line or interline, the through rate must not exceed the combination of local rates based upon terminal, junction, or main-line points.

Wherever it is found that the through rate to any given point does exceed the combination of local rates, the combination of locals must be protected by and through a request made of this Commission for permission to amend the through or local tariff, as the case may be, so as not to exceed the lower combination rates, making such amendment retroactive in effect to the date upon which the excessive through rate was named; provided, that no rate of this character shall be made retroactive in effect prior to the date this ruling becomes effective, in any case where such through tariff carries the provision that through rates named must be applied regardless of what lower combinations may be made. All tariffs carrying a provision of this kind must be immediately amended, striking out such provision as applies to Nevada intrastate traffic, effective the same date as this ruling.

Further, it is hereby ordered that in no case shall a rate be charged on any commodity exceeding the class rate applicable on such commodity. That is, wherever the application of the current Western Classification or Exceptions thereto and the class rate named makes a lower rate than the commodity rate named, the class rate must be applied; and wherever the commodity rate makes the lowest rate, it must be applied.

This ruling shall take effect May 1, 1910.

By order of the Commission:

Issued April 7, 1910.

E. H. WALKER, *Secretary*.

GENERAL RULING NO. 1

In re the matter of switching low-grade commodities reaching Goldfield over the lines of the Tonopah and Goldfield Railroad:

Several informal complaints have been made to the Commission at various times by J. Gottstein and others, alleging error in weights of carload shipments of hay which were not weighed in transit and that charges were assessed on the basis of invoice weights.

Invoice weights should not be applied except in cases where it is impossible to secure track-scale weights.

The Tonopah and Goldfield Railroad maintain track scales at Main Line Junction, and at Goldfield, when necessary, use the track scales belonging to the Western Ore Purchasing Company. The said railroad company in reply to the aforesaid complaints have advised the Commission that they are agreeable to the application of either track-scale or invoice weights and have requested that a ruling be made in order that the question may be definitely settled.

On the other hand, Mr. Gottstein, in behalf of himself and other shippers, demands that they be accorded a free weighing service at Goldfield covering carload shipments of low-grade commodities when, in their judgment, said shipments appear to be short of weights.

We do not believe that this position is well taken and feel that if the shipments are weighed in transit at Main Line Junction, a point thirty-five miles north of Goldfield, and the waybill weights and charges corrected to the actual weight determined at that point, such service should, in every way, be satisfactory. If, however, on arrival at Goldfield there is further contention regarding the correctness of the weights, a reciprocal rule may be adopted. For example, if the variation in weight does not exceed 2,000 pounds in the reweighing at Goldfield, consignee shall be entitled to the benefit of the corrected weight, but shall pay to the carrier for the weighing service a charge not exceeding \$2.50 per car.

If, however, in reweighing there is a difference exceeding 2,000 pounds in favor of consignee, he shall have the benefit of the corrected weight and shall not be required to pay carrier for the service incidental to reweighing.

The complainant also insists that, where weights of carload shipments are challenged, the cars, after being made empty, should be weighed in order to secure correct weights of the same. Empty cars are weighed periodically by the companies that own them, and the weight is stenciled on each car. If the dealer has reason to believe the weight of the car, as marked on it, is incorrect, then he should have the right to have it weighed, but unless it is more than 500 pounds heavier than the tare indicates, he should pay the railway company for switching and weighing an allowance not exceeding \$2.50 per car.

It is therefore ruled that all carload shipments of hay, lumber, coal, brick, cement, and other low-grade commodities destined to Goldfield shall be reweighed at Main Line Junction on and after January 20, 1911, and waybill weights and charges accordingly corrected to conform to the actual scale weights.

RAILROAD COMMISSION OF NEVADA,

Dated December 30, 1910.

By E. H. WALKER, *Secretary*.

TARIFF RULING No. 5

To Railroads Operating in Nevada:

It is hereby ordered that all rates established on live stock or any other commodity, between points in the State of Nevada, requiring shippers to forward a trainload of a specified number of cars in order to enjoy the rate named, shall be so amended as to eliminate the trainload minimums and leave the rates in effect on single carload shipments.

This order shall take effect on August 1, 1911, and the rates above referred to must be amended as ordered on or before that date.

RAILROAD COMMISSION OF NEVADA,

Dated December 20, 1911.

By E. H. WALKER, *Secretary*.

ACCOUNTING CIRCULAR No. 2

To the Accounting Officers of Railroads Operating in Nevada:

At a regular meeting of the Railroad Commission of Nevada, held Wednesday, April 8, 1914, it was unanimously ordered that the following resolution be adopted, and that the railroads operating in the State of Nevada be required to comply with the same:

It appearing to the Commission that in all freight-rate cases of any importance brought before it the questions of density of traffic of intrastate freight moving between Nevada points, together with the gross earnings per ton per mile accruing thereon, are of great importance in determining the question of reasonable rates, regardless of whether a case involves the movement of a single commodity between individual points or relates to a general readjustment of all class or commodity freight rates, either local or joint; it is, therefore,

Ordered: That during the months of May, 1914, and October, 1914, and following regularly two months in each year thereafter—namely, the months of March and October—all railroads operating in Nevada will be required to furnish this Commission with one copy of every local and joint or through freight waybill covering the movement of intrastate freight in Nevada issued each day during said months at every station on its company's line of railroad in the State of Nevada.

This order has been issued by virtue of the authority vested in the Commission by sections 13 and 20 of the Railroad Commission Law of Nevada. In view of the fact that the Commission is authorized to call for additional reports and data, it is thought that the method prescribed by the foregoing order will be less burdensome to the railroad companies than it would be if such information and data were called for specifically when required to meet special cases.

For your information will state that this resolution has been adopted in order that the Commission may at any time work up information relative to tonnage and earnings on freight moving between strictly Nevada points, without the necessity of throwing the burden of working up such data upon the carriers, or going to the expense of sending the Commission's employees to various points in the State to obtain such information.

All copies of waybills received by the Commission will be considered as confidential, and files of such waybills will not be open to inspection by the public.

The Commission believes that it is familiar with the methods employed by the railroads operating in the State in waybilling freight, and therefore offers the following suggestions to carriers in order to enable them to comply with this order with little trouble and expense:

First—That an order be issued to all agents in the State of Nevada requiring them to give all local and joint waybills covering freight destined to points in the same State a separate series of numbers, commencing with the number one on the first day of each month.

Second—That in taking book and tissue copies of all such waybills all agents in the State of Nevada be required to have an extra tissue copy taken for the use of the Railroad Commission of Nevada.

Third—That instructions be issued to agents in Nevada requiring them to forward the Commission's copies of waybills directly to the Commission once during each week of the month for which such copies are required; namely, during the month of May, 1914, October, 1914, and regularly every March and October thereafter, unless the Commission designates a different period, in which case ample notice will be given.

Kindly acknowledge receipt of this circular immediately, advising as to the action taken by your company in this matter.

RAILROAD COMMISSION OF NEVADA,

Dated April 8, 1914.

By E. H. WALKER, *Secretary*.

THE RAILROAD COMMISSION LAW

An act to regulate railroads, telegraph and telephone companies and other common carriers in this State, creating a Railroad Commission, constituting the Governor, the Lieutenant-Governor, and the Attorney-General a Railroad Board for the appointment and the removal of the Railroad Commissioners, prevent the imposition of unreasonable rates, prevent unjust discrimination, insure an adequate railway service, and fixing maximum freight charges.

[Approved March 5, 1907, and amended March 20, 1909, and March 27, 1911]

Railroad Commission Created—Railroad Board—Terms of Office.

SECTION 1. A railroad commission is hereby created, to be composed of three commissioners. The governor, the lieutenant-governor, and the attorney-general shall constitute a railroad board for the purpose of appointing such commissioners. A majority of the members of said railroad board may perform all the duties required of such board. Within thirty days after the passage of this act the railroad board shall appoint such commissioners and designate the term of each, and they shall hold until their successors are appointed. The term of one such appointee shall terminate on the first Monday in February, 1909; the term of the second such appointee shall terminate on the first Monday in February, 1910; and the term of the third such appointee shall terminate on the first Monday in February, 1911. On the second Monday in January, 1909, and annually thereafter, there shall be appointed, in the same manner, one commissioner for the term of three years from the first Monday in February of such year. Each commissioner so appointed shall hold office until his successor is appointed and qualified. Any vacancy shall be filled by appointment by the railroad board.

Qualifications.

(a) One commissioner, who shall be designated as chief commissioner and shall be chairman of the commission, shall be an attorney at law, and well versed in the law of railroad regulation; one to be designated as first associate commissioner shall be a practical railroad man familiar with the operation of railroads generally; the third, to be designated as the second associate commissioner, shall be a business man having a general knowledge of fares and freights, tolls and charges, as levied by the railroads, and all common carriers included within the term "railroad" as defined in this act. Each commissioner, as herein designated, shall have an equal voice and vote upon all questions whereon the commission is required to or may act as a body. A majority of said commission shall have full power to act in all matters within its jurisdiction, and in the event of two of the commissioners being disabled or disqualified from acting, or in the event of there being two vacancies at the same time in the commission, the remaining commissioner shall have power to do all the acts and things which a majority of the com-

mission might do, and his official acts shall stand as the acts of the commission. At no time shall more than two of said commissioners be members of the same political party.

May Be Removed by Railroad Board.

(b) The railroad board may at any time remove any commissioner for any inefficiency, neglect of duty, or malfeasance in office. Before such removal it shall give such commissioner a copy of the charges made against him and shall fix a time when he can be heard in his own defense, which shall not be less than ten days thereafter, and said hearing shall be open to the public. If he shall be removed the railroad board shall file in the office of the secretary of state a complete statement of all charges made against such commissioner and findings thereon, with the record of the proceedings.

Commissioners Must Have No Pecuniary Railroad Interests.

(c) No person so appointed shall be pecuniarily interested in any railroad in this state or elsewhere, and if any such commissioner shall voluntarily become so interested, his office shall *ipso facto* become vacant; and if he shall become so interested otherwise than voluntarily, he shall, within a reasonable time, divest himself of such interest, and failing to do so his office shall become vacant and the railroad board shall proceed as provided for in section 1, subdivision b, of this act.

Must Investigate All Complaints.

(d) Whenever a complaint is made to the commission of a violation of any of the provisions of this act, or of any order of the commission, it shall, within four months, commence investigation of said charge, and shall determine the same within six months, unless the person preferring said charges shall agree in writing to a longer time. A failure to comply with this provision shall *ipso facto* render the office of each of the commissioners vacant, and the railroad board shall appoint new commissioners as provided for by this act.

Chief and First Associate Commissioners Shall Devote Entire Time.

(e) Neither the chief commissioner nor the first associate commissioner shall hold any other office or position of profit, or pursue any other regular business or vocation. These limitations and restrictions shall not apply to the second associate commissioner, but none of the commissioners shall be a member of any political convention, or a member of any committee of any political party.

Each Commissioner Shall Take Oath.

(f) Before entering upon the duties of his office, each of said commissioners shall take and subscribe the constitutional oath of office, and shall in addition thereto swear (or affirm) that he is not pecuniarily interested in any railroad in this state or elsewhere, or common carrier, which oath or affirmation shall be filed in the office of the secretary of state.

Salaries.

(g) The chief commissioner shall receive a salary of \$5,000 per annum, the first associate commissioner shall receive a salary of \$4,000 per annum, and the second associate commissioner shall receive a salary of \$2,500 per annum, all payable in the same manner as the salaries of other state officers are paid.

Secretary.

(h) Said commission may appoint a secretary, who shall be an expert rate man, at a salary of not more than \$2,400 per annum, and may employ such other clerks and experts as may be necessary to perform any service it may require of them, and shall fix their compensation.

Oath of Secretary.

(i) The secretary shall take and subscribe to an oath similar to that of the commissioners, and shall keep full and correct records of all transactions and proceedings of the commission, and shall perform such other duties as may be required by the commission. Any person ineligible to the office of commissioner shall be ineligible to the office of secretary.

"Railroad Commission of Nevada"—Seal.

(j) The commission shall be known collectively as the "Railroad Commission of Nevada," and in that name may sue and be sued. It shall have a seal with the words "Railroad Commission of Nevada," and such other design as the commission may prescribe engraved thereon, by which it shall authenticate its proceedings, and of which the courts shall take judicial notice.

Office at Capitol—Expenses.

(k) The commission shall keep its office at Carson City, and shall be provided by the board of capitol commissioners with suitable room or rooms, necessary office furniture, supplies, stationery, books, periodicals, maps, and all necessary expenses shall be audited and paid as other state expenses are audited and paid. The commission may hold sessions at any place other than its office, when the convenience of the parties so requires. The commissioners and secretary and such other clerks and experts as may be employed shall be entitled to receive from the state their necessary expenses while traveling on the business of the commission, including the cost of lodging and subsistence. Such expenditures shall be sworn to by the person who incurred the expense, and be approved by the chairman of the commission.

Rules.

(l) The commission shall have the power to adopt and publish rules to govern its proceedings, and to regulate the mode and manner of all investigations and hearings of railroads and other parties before it, and all hearings shall be open to the public.

Railroad Matters.

(m) The commission may confer by correspondence, or by attending conventions, or otherwise, with the railroad commissioners of other states, and with the Interstate Commerce Commission on any matters relating to railroads. All necessary expenses incurred in attending such conventions shall be a charge against the state, and be audited and paid as other state claims are paid; *provided*, that all such claims shall be sworn to by the commissioner incurring the expense, and be approved by the chairman.

Organization.

(n) Nothing herein contained shall be so construed as to affect the date of the beginning or ending of the term of any commissioner now in office, or to change the dates of future appointments from those now

prescribed by law, but from and after the passage of this amendatory act the commissioner now designated as the one who shall not hold any other office or position of profit, or pursue any other business or vocation, or serve on or under any committee of any party, but shall devote his entire time to the duties of his office, shall be officially designated "Chief Commissioner," and be paid the salary herein prescribed, and the commissioner whose term began on the first Monday in February, 1911, shall be officially designated "First Associate Commissioner," and the salary paid him as herein prescribed. The salaries herein provided for shall be deemed and considered full compensation for all services rendered by the members of the commission, whether as railroad commissioners or in any other official or ex officio capacity. *As amended March 20, 1909, and March 27, 1911.*

"Railroad" Defined.

SEC. 2. The term "railroad," as used herein, shall mean and embrace all corporations, companies, individuals, associations of individuals, their lessees, trustees or receivers (appointed by any court whatsoever) that now, or may hereafter, own, operate, manage, or control any railroad or part of a railroad as a common carrier in this state, or cars, or other equipment used thereon, or bridges, terminals, or sidetracks, or any docks or wharves or storage elevators used in connection therewith, whether owned by such railroads or otherwise. The term "railroad," whenever used herein, shall mean and embrace express companies, telegraph and telephone companies, and all companies which may own cars of any kind or character, used and operated as a part of railroad trains, in or through this state, and all duties required of and penalties imposed upon any railroad or any officer or agent thereof shall, in so far as the same are applicable, be required of and imposed upon express companies, telegraph and telephone companies, and companies which may own cars of any kind or character, used and operated as a part of railroad trains in or through this state, and their officers and agents, and the commission shall have the power of supervision and control of all such companies to the same extent as of railroads.

Provisions of Act Shall Apply.

(a) The provisions of this act shall apply to the transportation of passengers and property and the transmission of messages between points within the state, and to the receiving, switching, delivering, storing and hauling of such property, and receiving and delivering messages, and to all charges connected therewith, including icing charges and mileage charges, and shall apply to all railroads, corporations, express companies, car companies, freight and freight line companies, and to all associations of persons, whether incorporated or otherwise, that shall do business as common carriers, upon or over any line of railroad within this state, and to any common carrier engaged in the transportation of passengers and property, wholly by rail, or partly by rail and partly by water. *As amended March 20, 1909.*

Reasonable Charges by Railroads Required.

SEC. 3. Every railroad is hereby required to furnish reasonably adequate service and facilities, and the charges made for any service rendered or to be rendered in the transportation of passengers or property or for any service in connection therewith, or for the receiving, switching, delivering, storing or handling of such property, shall be

reasonable and just, and every unjust and unreasonable charge for such service is prohibited and declared to be unlawful.

Railroads Must Print and Post Schedules of Fares and Freights.

SEC. 4. Every railroad shall print in plain type, and file with the commission within a time fixed by the commission, schedules which shall be open to public inspection, showing all rates, fares and charges for the transportation of passengers and property, and any service in connection therewith, which it has established and which are in force at the time between all points in this state upon its line, or any line controlled or operated by it, and the rates, fares and charges shown on such schedules as are in effect at the date this act takes effect. The schedule printed as aforesaid shall plainly state the charges upon its line or any line controlled or operated by it in this state between which passengers and property will be carried, and there shall be filed therewith the classifications of freight in force. Every railroad shall publish with and as a part of such schedules all rules and regulations that in any manner affect the rates charged or to be charged for the transportation of passengers or property, also its charges for delay in unloading or loading cars, for track and car service, or rental, and for demurrage, switching, terminal or transfer service, or for rendering any other service in connection with the transportation of persons or property. Two copies of said schedules for the use of the public shall be filed and kept on file in every depot, station and office of such railroad where passengers or freight are received for transportation in such form and place as to be accessible to the public and where they can be conveniently inspected. When passengers or property are transported over connecting lines in this state operated by more than one railroad, and the several railroads operating such lines establish joint rates, fares and charges, a schedule of joint rates shall also in like manner be printed and filed with the commission, and in every depot, station and office of such railroads where such passengers or property are received for transportation.

No Change in Schedule Except on Notice of 30 Days—Proviso for Reduction.

(a) No change shall thereafter be made in any schedule, including schedule of joint rates, or in any classification, except upon thirty days' notice to the commission, and all such changes shall be plainly indicated upon existing schedules, or by filing new schedules in lieu thereof thirty days prior to the time the same are to take effect; *provided*, that the commission, upon application of any railroad, may prescribe a less time within which a reduction may be made. Copies of all new schedules shall be filed as hereinbefore provided in every depot, station and office of such railroad ten days prior to the time the same are to take effect, unless the commission shall prescribe a less time.

Notice of Change Shall Be Posted.

(b) Whenever a change is made in any existing schedule, including schedule of joint rates, a notice shall be posted by the railroad in a conspicuous place in every depot, station and office, stating that changes have been made in the schedule on file, specifying the class or commodity affected and the date when the same will take effect.

Schedule Must Be Adhered To.

(c) It shall be unlawful for any railroads to charge, demand, collect or receive a greater or less compensation for the transportation of pas-

sengers, property, or for any service in connection therewith, than is specified in such printed schedule, including schedules of joint rates, as may at the time be in force, and the rates, fares and charges named therein shall be the lawful rates, fares, and charges until the same are changed as herein provided.

Commission May Prescribe Changes in Schedule.

(d) The commission may prescribe such changes in the form in which the schedules are issued by the railroad as may be found expedient, and such schedules shall, as far as practicable, conform to the forms prescribed by the Interstate Commerce Commission.

Joint Rates—Proviso.

SEC. 5. Whenever passengers or property are transported over two or more connecting lines of railroads between points in this state, and the railroad companies have made joint rates for the transportation of the same, such rates and all charges in connection therewith shall be just and reasonable, and every unjust and unreasonable charge is prohibited and declared to be unlawful; *provided*, that a less charge by each of said railroads for its proportion of said joint rates than is made locally between the same points on their respective lines shall not for that reason be construed as a violation of the provisions of this act, nor render such railroads liable to any of the penalties hereof.

Rates Must Be Uniform.

SEC. 6. Nothing in this act shall be construed to prevent concentration, commodity, transit and other special contract rates, but all such rates shall be open to all shippers of a like kind of traffic under similar circumstances and conditions, and shall be subject to the provisions of this act as to the printing and filing of the same; *provided*, all such rates shall be under the supervision and regulation of the commission.

Commission Shall Fix Just and Reasonable Rates for All Railroad, Express, Telegraph, and Telephone Service.

SEC. 7. The commission shall have full power to prescribe just and reasonable railroad classifications of freight; and to fix just and reasonable charges for the transportation of all intrastate freight and intrastate passengers, for sleeping-car accommodations, for goods, merchandise, and all matter of every kind carried by express companies within this state, for the transmission of messages by telegraph companies, and for the use of telephone lines within the state. The commission shall also have power to make just and reasonable regulations for the apportionment of all such charges between two or more companies jointly engaged in the transportation of freight, passengers, express matter, telegraph or telephone messages.

May Investigate Physical Condition of All Railroad Appliances.

The commission shall also have full power to investigate the physical condition of all railroad property, and, in the interest of safety or service, shall have power to determine and order repairs, reinforcements or reconstruction of property, including buildings, tracks, and equipment; also the power to determine and order the use of safety appliances in the interest of employees and the traveling public, such as crossing-gates, flagmen, bells, devices, etc., interlocking plants at railway crossings and all other modern safety devices. The commission shall have full power to determine and order the manner in which any

railroad, street railway, steam or electric railway, or other common carrier, may cross another railroad, street railway, whatever the motive power, at grade, or above or below grade, and shall prescribe the safety appliances and regulations that should be adopted at such crossings or at existing grade crossings of railroads, steam, electric, or other motive power railways for the protection of the public and the prevention of accidents. The commission shall have the power, whenever, in its judgment, it shall appear wise and proper to do so, to authorize and direct reasonable changes in train schedules and train service.

May Order Transfer Tracks.

The commission shall have power to determine and order the construction of connecting or transfer tracks between two or more lines of railway, which may now or hereafter enter or pass through any town or city in this state. The expenses of said construction of such tracks to be divided between and paid by the corporations operating said railways.

Railroads Must Transfer Cars.

It shall be the duty of all railroad corporations whose tracks shall be so connected reciprocally to transfer cars from one railroad to the other upon demand of shippers or the railroad concerned, and for which transfer service reasonable charges may be made.

Short Haul and Long Haul.

Nothing in this act shall be construed so as to allow any railroad to charge more for a shorter than for a longer haul, either for passengers or freight, when the shorter haul is included within the longer or to authorize the commission to allow such charge to be made. *As amended March 20, 1909.*

Government Freight May Go Free—Passes, Etc., to Certain Persons.

SEC. 8. Nothing herein shall prevent the carriage, storage, or handling of freight free or at reduced rates for the United States, the state or any political subdivision thereof, or any municipality thereof, or for charitable purposes, or to and from fairs and expositions for exhibition thereat, or household goods and supplies, the property of employees, or the issuance of mileage, commutation, or excursion passengers' tickets; *provided*, that the same shall be obtainable by any persons applying therefor, without discrimination, or of party tickets; *provided*, that the same shall be obtainable by any person applying therefor under like circumstances and conditions. This act shall not be construed as preventing railroads from giving free transportation or reduced rates therefor to any minister of the gospel, constable in any county of the state, officer or agent of incorporated colleges, college professors, school teachers, students attending institutions of learning, regular agents of charitable societies when traveling upon the business of the society only, destitute or homeless persons, railroad officers, attorneys, directors, employees or members of their families, or bona fide ex-railroad employees of any steam or electric railroad in search of employment, or to prevent the exchange of passes with officers, attorneys, or employees of other railroads and members of their families.

Attendants for Live Stock.

(a) Upon any shipment of live stock or other property of such nature as to require the care of an attendant, the railroad may furnish to the

shipper, or some person or persons designated by him, free transportation for such attendant, including return passage to the point at which the shipment originated; *provided*, that there shall be no discrimination in reference thereto between such shippers, and the commission shall have power to prescribe regulations in relation thereto. *As amended March 20, 1909, and March 27, 1911.*

Depots Must Be Maintained in Good Condition.

SEC. 9. It shall be the duty of every railroad to provide and maintain adequate depots and depot buildings at its regular stations and establish new stations wherever required, for the accommodation of passengers, and said depot building shall be kept clean, well lighted and warm for the comfort and accommodation of the traveling public. All railroads shall keep and maintain adequate and suitable freight depots, wherever needed, buildings, switches and sidetracks for the receiving, handling and delivering of freight transported or to be transported by such railroad; *provided*, that this shall not be construed as repealing any existing law on the subject; *provided further*, that to remove all doubts which have arisen upon the subject, the commission is specifically invested with full power to enforce the provisions of this section and of this entire act. *As amended March 20, 1909.*

Railroads Shall Furnish Cars for Shippers—Live Stock, Etc., Preferred.

SEC. 10. Every railroad shall, when within its power to do so, and upon reasonable notice, furnish suitable cars to any and all persons who may apply therefor, for the transportation of any and all kinds of freight in carload lots. In case of insufficiency of cars at any time to meet all requirements, such cars as are available shall be distributed among the several applicants therefor in proportion to their respective immediate requirements without discrimination between shippers or competitive or noncompetitive places; *provided*, preference may be given to shipments of live stock and perishable property.

Commission May Enforce Reasonable Regulations.

(a) The commission shall have the power to enforce reasonable regulations for furnishing cars to shippers, and switching the same, and for the loading and unloading thereof, and the weighing of the cars and freight offered for shipment over any line of railroad.

Proper Facilities for Interchange of Traffic.

SEC. 11. All railroad companies as between themselves, and all inter-urban and electric railroads as between themselves and each other, shall afford all reasonable and proper facilities for the interchange of traffic between their respective lines for forwarding and delivering passengers and property, and shall transfer and deliver without unreasonable delay or discrimination any freight or cars, loaded or empty, or any passengers destined to any point on its own or any connecting lines; *provided*, that precedence over other freight may be given to live stock and perishable freight.

Commission Shall Have Control of Private Tracks.

(a) The commission shall have control over private tracks in so far as the same are used by common carriers, in connection with any railroad for the transportation of freight, in all respects the same as though such tracks were a part of the track of said railroad.

Commission Must Investigate All Complaints — Notice to Railroads and Complainants.

SEC. 12. Upon complaint of any person, firm, corporation or association, or of any mercantile, agricultural or manufacturing society, or of any body politic or municipal organization, that any of the rates, charges or classifications, or any joint rate or rates are in any respect unreasonable or unjustly discriminatory, or that any regulation or practice whatsoever affecting the transportation of persons or property, or any service in connection therewith, are in any respect unreasonable or unjustly discriminatory, or that any service is inadequate, the commission may notify the railroad complained of that complaint has been made, and ten days after such notice has been given the commission may proceed to investigate the same as hereinafter provided, but before proceeding to make such investigation the commission shall give the railroads and the complainants ten days' notice of the time and place when and where such matters will be considered and determined, and said parties shall be entitled to be heard and shall have process to enforce the attendance of witnesses. If upon such investigation the rate or rates, or any regulation, practice or service complained of shall be found to be unreasonable or unjustly discriminatory, or the service shall be found to be inadequate, the commission shall have power to fix and order substituted therefor such rate or rates, fares, charges or classifications, as it shall have determined to be just and reasonable and which shall be charged, imposed and followed in the future, and shall also have power to make such orders respecting such regulation, practice or service, as it shall have determined to be reasonable and which shall be observed and followed in the future.

Commission May Order Separate Hearings.

(a) The commission may, when complaint is made of more than one rate or charge, order separate hearings thereon, and may consider and determine the several matters complained of separately, and at such times as it may prescribe. No complaint shall of necessity at any time be dismissed because of the absence of direct damage to the complainant.

Commission May Take the Initiative.

(b) Whenever the commission shall believe that any rate or rates or charge or charges may be unreasonable or unjustly discriminatory, and that investigation relating thereto should be made, it may, upon its own motion, investigate the same. Before making such investigation it shall present to the railroad a statement in writing, setting forth the rate or charge to be investigated. Thereafter, on ten days' notice to the railroad of the time and place of such investigation, the commission may proceed to investigate such rate or charge in the same manner and make like orders in respect thereto as if such investigation had been made upon complaint.

This Section Construed.

(c) This section shall be construed to permit any railroad to make complaint with like effect as though made by any person, firm, corporation or association, mercantile, agricultural or manufacturing society, body politic or municipal organization.

Various Powers of Commission.

SEC. 13. Each of the commissioners, for the purposes mentioned in

this act, shall have power to administer oaths, certify to official acts, issue subpoenas, compel the attendance of witnesses, and the production of papers, way-bills, books, accounts, documents and testimony. In the case of disobedience on the part of any person or persons to comply with any order of the commission or any commissioner or any subpoena, or on the refusal of any witness to testify to any matter regarding which he may be lawfully interrogated, it shall be the duty of the district court of any county, or a judge thereof, on application of a commissioner, to compel obedience by attachment proceedings for contempt, as in the case of disobedience of the requirements of a subpoena issued from such court, or a refusal to testify therein.

Fees and Mileage for Witnesses—Proviso.

(a) Each witness who shall appear before the commission by its order shall receive for his attendance the fees and mileage now provided for witnesses in civil cases in courts of record, which shall be audited and paid by the state in the same manner as other expenses are audited and paid, upon the presentation of proper vouchers, sworn to by such witnesses and approved by the chairman of the commission; *provided*, that no witness subpoenaed at the instance of parties other than the commission shall be entitled to compensation from the state for attendance or travel unless the commission shall certify that his testimony was material to the matter investigated.

Depositions.

(b) The commission or any party may, in the investigation, cause the depositions of witnesses residing within or without the state to be taken in the manner prescribed by law for like depositions in civil actions in district courts.

Complete Records Must Be Kept—Certified Copy Received in Evidence.

(c) A full and complete record shall be kept of all proceedings had before the commission or any investigation had under section 12 of this act, and all testimony shall be taken down by the stenographer appointed by the commission. Whenever any complaint is served upon the commission under the provisions of section 16 of this act the commission shall, before said action is reached for trial, cause a certified transcript of all proceedings had and testimony taken upon such investigation to be filed with the clerk of the district court of the county where the action is pending. A transcribed copy of the evidence and proceedings, or any specific part thereof, or any investigation, taken by the stenographer appointed by the commission, being certified by such stenographer to be a true and correct transcript in longhand of all testimony taken at the investigation, or of a particular witness, or of other specific part thereof, carefully compared by him with his original notes, and to be a correct statement of the evidence and proceedings had on such investigation so purporting to be taken and transcribed, shall be received in evidence with the same effect as if such reporter were present and testified to the facts so certified. A copy of such transcript shall be furnished on demand, free of cost, to any party to such investigation; and to all other persons, a copy, on payment of a reasonable amount therefor, to be fixed by the commission. *As amended March 20, 1909.*

Commission Shall Fix Reasonable Rates—Joint Rates.

SEC. 14. Whenever, upon an investigation made under the provisions

of this act, the commission shall find any existing rate or rates, fares, charges or classification, or any joint rates or rates, or any regulation or practice whatsoever, affecting the transportation of persons or property, or any service in connection therewith, are unreasonable or unjustly discriminatory, or any service is inadequate, it shall determine and by order fix a reasonable rate, fare, charge, classification or joint rate to be imposed, observed and followed in the future in lieu of that found to be unreasonable or unjustly discriminatory, and it shall determine and by order fix a reasonable regulation, practice or service to be imposed, observed or followed in the future, in lieu of that found to be unreasonable or unjustly discriminatory or inadequate, as the case may be, and it shall cause a certified copy of each such order to be delivered, to an officer or station agent of the railroad affected thereby, which order shall of its own force take effect and become operative thirty days after the service thereof. All railroads to which the order applies shall make such changes in their schedule on file as may be necessary to make the same conform to said order, and no change shall thereafter be made by any railroad in any such rates, fares or charges, or in any joint rate or rates, without the approval of the commission. Certified copies of all other orders of the commission shall be delivered to the railroads affected thereby, in like manner, and the same shall take effect within such time thereafter as the commission shall prescribe.

Commission May Rescind or Alter Its Own Orders.

(a) The commission may at any time, upon application of any person or any railroad, and upon notice to the parties interested, and after opportunity to be heard as provided in section 12, rescind, alter or amend any order fixing any rate or rates, charges or classification, or any other order made by the commission, and certified copies of the same shall be served and take effect as herein provided for original orders. *As amended March 20, 1909.*

Rates in Force Until Changed.

SEC. 15. All rates, fares, charges, classifications and joint rates fixed by the commission shall be in force, and shall be prima facie lawful, until changed or modified by the commission, or in pursuance of section 16 of this act. All regulations, practices and services prescribed by the commission shall be in force and shall be prima facie reasonable, unless suspended or found otherwise in an action brought for that purpose, pursuant to the provisions of section 16 of this act, or until changed or modified by the commission as provided for in paragraph a, section 14, of this act. *As amended March 20, 1909.*

Railroad May Commence Legal Action Within Ninety Days—Shall Have Precedence.

SEC. 16. Any railroad or other party in interest being dissatisfied with any order of the commission fixing any rate or rates, fares, charges, classifications, joint rate or rates, or any order fixing any regulations, practices or services, may, within ninety days, commence an action in the district court of the proper county, against the commission as defendant, to vacate and set aside any such order on the ground that the rate or rates, fares, charges, classifications, joint rate or rates, fixed in such order is unlawful or unreasonable, or that any such regulation, practice or service fixed in such order is unreasonable,

in which action the adverse parties shall be served with a summons and copy of the complaint. The commission shall file its answer, and on leave of court, any interested party may file the answer to said complaint within thirty days, after the service thereof, whereupon said action shall be at issue and stand ready for trial upon twenty days' notice by either party. All actions brought under this section shall have precedence over any civil cause of a different nature pending in such court, and the court shall always be deemed open for the trial thereof, and the same shall be tried and determined as other civil actions; any party to such action may introduce original evidence in addition to the transcript of the evidence offered to said commission.

No Injunction Issued Without Notice to Commission.

(a) No injunction shall issue suspending or staying any order of the commission except upon application to the court or judge thereof, notice to the commission having been first given and hearing having been had thereon; *provided*, that all rates fixed by the commission shall be deemed reasonable and just, and shall remain in full force and effect until final determination by the courts, upon appeal.

Commission Must Have Notice of New Evidence.

(b) If, upon the trial of such action, evidence shall be introduced by the plaintiff which is found by the court to be different from that offered upon the hearing before the commission, or additional thereto, the court before proceeding to render judgment, unless the parties to such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the commission, and shall stay further proceedings in said action for fifteen days from the date of such transmission. Upon receipt of such evidence the commission shall consider the same, and may alter, modify, amend or rescind its order relating to such rate or rates, fares, charges, classifications, joint rate or rates, regulation, practice or service complained of in said action, and shall report its action thereon to said court within ten days from the receipt of such evidence.

Judgments, How Rendered.

(c) If the commission shall rescind its order complained of, the action shall be dismissed; if it shall alter, modify or amend the same, such altered, modified or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon, as though made by the commission in the first instance. If the original order shall not be rescinded or changed by the commission, judgment shall be rendered upon such original order.

Appeals.

(d) Either party to said action within sixty days after service of a copy of the order or judgment of the court may appeal or take the case up on error as in other civil actions. Where an appeal is taken the cause shall, on the return of the papers to the higher court, be immediately placed on the calendar of the then pending term, and shall be assigned and brought to a hearing in the same manner as other causes on the calendar.

Burden of Proof on Plaintiff.

(e) In all actions under this section the burden of proof shall be upon the plaintiff to show by clear and satisfactory evidence that the

order of the commission complained of is unlawful, or unreasonable, as the case may be.

Same Practice as Civil Actions.

SEC. 17. In all actions and proceedings in court arising under this act all processes shall be served, and the practice and rules of evidence shall be the same as in civil actions, except as otherwise herein provided. Every sheriff or other officer empowered to execute civil processes shall execute any process issued under the provisions of this act, and shall receive such compensation therefor as may be prescribed by law for similar services.

No Person Excused from Testifying—Proviso.

(a) No person shall be excused from testifying or from producing books and papers in any proceedings based upon or growing out of any violation of the provisions of this act, on the ground or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to penalty or forfeiture, but no person having so testified shall be prosecuted or subjected to any penalty or forfeiture for, or on account of, any transaction, matter or thing concerning which he may have testified or produced any documentary evidence; *provided*, that no person so testifying shall be exempted from prosecution or punishment for perjury in so testifying.

Certified Copies Prima Facie Evidence.

(b) Upon application of any person the commission shall furnish certified copies, under the seal of the commission, of any order made by it, which shall be prima facie evidence in any court or proceeding of the facts stated therein.

Authority of Commission.

SEC. 18. The commission shall have the authority to inquire into the management of the business of all railroads, and shall keep itself informed as to the manner and method in which the same is conducted, and shall have the right to obtain from any railroad all necessary information to enable the commission to perform the duties and carry out the objects for which it was created.

Blanks—Perjury, When.

(a) The commission shall cause to be prepared suitable blanks for the purposes designated in this act, which shall conform as nearly as practicable to the forms prescribed by the Interstate Commerce Commission, and shall, when necessary, furnish such blanks to each railroad. Any railroad receiving from the commission any such blanks shall cause the same to be properly filled out so as to answer fully and correctly each question therein propounded, and in case it is unable to answer any question it shall give a good and sufficient reason for such failure, and said answer shall be verified under oath by the proper officer of said railroad and returned to the commission at its offices within the time fixed by the commission; the making of a false affidavit or filing of the same shall be deemed perjury and punishable as such under the statutes of Nevada defining perjury.

Right of Inspection—Proviso.

(b) The commission, or any commissioner, or any person or persons employed by the commission for that purpose, shall, upon demand,

have the right to inspect the books and papers of any railroad and to examine under oath any officer, agent or employee of such railroad in relation to any matter which is the subject of complaint and investigation; *provided*, that any person other than the one of the said commissioners who shall make such demand shall produce his authority to make such inspection under the hand of a commissioner, or of the secretary and under the seal of said commission.

Orders and Subpenas—Penalties.

(c) The commission may require by order or subpena, and to be served on any railroad, in the same manner that a summons is served in a civil action in a district court, the production within this state, at such time and place as it may designate, of any books, papers or accounts relating to any matter which is the subject of complaint or investigation kept by said railroad in any office or place without the State of Nevada, or verified copies in lieu thereof, if the commission shall so order, in order that an examination thereof may be made by the commission or under its direction, and such subpena may issue to any sheriff in any county of the state. Any railroad failing or refusing to comply with any such order or subpena within a reasonable time shall, for each day it shall so fail or refuse, forfeit and pay into the state treasury a sum of not less than one hundred dollars nor more than one thousand dollars, to be recovered in a civil action brought in the name of the Railroad Commission of Nevada.

Railroads Shall Submit Contracts.

SEC. 19. Every railroad, whenever required by the commission, shall, within a time to be fixed by the commission, deliver to the commission for its use copies of all contracts which relate to the transportation of persons or property, or any service in connection therewith made or entered into by it with any other railroad company, terminal company, depot company, equipment company, car company, express or other transportation company, bridge company, or any shipper or shippers, producers or consumers, or other persons doing business with it.

Railroads Shall Report Annually Concerning Passes, Etc.

(a) Every railroad shall, on the first Monday in January of each year, and oftener if required by the commission, file with the commission a verified list of all railroad tickets, passes, and mileage books issued free or for other than actual bona fide money consideration at full established rates during the preceding year, together with the names of the recipients thereof, the amount received therefor, and the reason for issuing the same. This provision shall not apply to the sale of tickets at reduced rates open to the public. *As amended March 20, 1909.*

Full Reports of Nevada Business.

SEC. 20. Every railroad company incorporated or doing business in this state, or which shall hereafter become incorporated or do business in this state shall, on or before the 15th day of September, 1907, and on or before the same day of each year thereafter, make and transmit to the commission in its office in Nevada a full and true statement, under oath of the proper officer of such corporation, of the affairs of such corporation relative to the State of Nevada, for the year ending on the

30th day of June preceding, which statement for the State of Nevada shall be similar in character and detail to the annual report required to be made by railroad companies to the Interstate Commerce Commission, and such other and further information as may be required by the commission.

Commission Shall Cooperate with Interstate Commerce Commission.

SEC. 21. The commission shall have power, and on complaint of any person it is hereby made its duty, to investigate all or any freight rates on interstate traffic on railroads in this state, and when the same are, in the opinion of the commission, excessive or discriminatory, or are levied or laid in violation of the interstate commerce law, or in conflict with the rulings, orders or regulations of the Interstate Commerce Commission, the commission shall present the facts to the railroad, with a request to make such changes as the commission may advise, and if such changes are not made within a reasonable time, the commission shall apply by petition to the Interstate Commerce Commission for relief. All freight tariffs issued by any such railroad relating to interstate traffic in this state shall be filed in the office of the commission within thirty days after the passage of this act, and all such tariffs thereafter issued shall be filed with the commission when issued.

Penalties for Railroads for Discriminatory Charges.

SEC. 22. If any railroad, or any agent or officer thereof, shall directly or indirectly, by any special rate, rebate, drawback, or by means of false billing, false classification, false weighing, or by any other device whatsoever, charge, demand, collect or receive from any person, firm, or corporation a greater or less compensation for any service rendered or to be rendered by it for the transportation of persons or property or for any service in connection therewith than that prescribed in the published tariffs then in force, or established as provided herein, or than it charges, demands, collects or receives from any other person, firm, or corporation for a like and contemporaneous service in the transportation of a like kind of traffic under substantially similar circumstances and conditions, such railroads shall be deemed guilty of unjust discrimination, which is hereby prohibited and declared to be unlawful, and upon conviction thereof shall forfeit and pay into the state treasury not less than one hundred dollars nor more than five thousand dollars for such offense; and any agent or officer so offending shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than fifty dollars nor more than one thousand dollars for each offense.

Certain Prohibitions.

(a) It shall be unlawful for any railroad to demand, charge, collect or receive from any person, firm or corporation, a less compensation for the transportation of property or for any service rendered or to be rendered by said railroad in consideration of said person, firm or corporation furnishing any part of the facilities incident thereto; *provided*, nothing herein shall be construed as prohibiting any railroad from procuring any facilities or service incident to transportation and paying a reasonable compensation therefor.

Discrimination Prohibited.

SEC. 23. That it shall be unlawful for any common carrier subject

to the provisions of this act to make or give any undue or unreasonable preference or advantage to any particular person, company, firm, corporation, or locality, or any particular description of traffic, in any respect whatsoever, or to subject any particular person, company, firm, corporation, or locality, or any particular description of traffic, to any undue or unreasonable prejudice or disadvantage in any respect whatsoever.

Acceptance of Rebates, Etc., Prohibited—Penalty.

SEC. 24. It shall be unlawful for any person, firm, or corporation knowingly to accept or receive any rebate, concession or discrimination in respect to transportation of any property wholly within this state, or for any service in connection therewith, whereby any such property shall by false billing, false classification, false weighing, or any other device whatsoever, be transported at a less rate than that named in the published tariffs in force as provided herein, or whereby any service or advantage is received other than is herein specified. Any person, firm or corporation violating the provisions of this section shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than fifty dollars nor more than one thousand dollars for each offense.

Passes to Public Officers Prohibited.

SEC. 25. It shall be unlawful for any person, firm or corporation engaged in business as a common carrier to give or furnish to any state, district, county or municipal officer of this state, or to any person other than those mentioned in section 8, any pass, frank, free or reduced transportation, or for any such state, district, county or municipal officer to accept such frank, pass, free or reduced transportation. Any firm, person or corporation, or the agent thereof, or any state, district, county or municipal officer violating the provisions of this section shall, upon conviction thereof, be fined in any sum not less than one hundred dollars, or more than five hundred dollars, and in addition to such penalty the office of any such state, district, county or municipal officer shall, upon his conviction, *ipso facto* become vacant. *As amended March 20, 1909.*

Treble Damages, When.

SEC. 26. If any railroad shall do or cause to be done or permit to be done any matter, act or thing in this act prohibited or declared to be unlawful, or shall omit to do any act, matter or thing required to be done by it, such railroad shall be liable to the person, firm or corporation injured thereby in treble the amount of damages sustained in consequence of such violation; *provided*, that any recovery as in this section provided shall in no manner affect the recovery by the state of the penalty prescribed for such violation.

Failure or Evasion of Railroad Employees Punished.

SEC. 27. Any officer, agent or employee of any railroad who shall wilfully fail or refuse to fill out and return any blanks as required by this act, or shall wilfully fail or refuse to answer any questions therein propounded, or shall knowingly or wilfully give a false answer to any such questions, or shall evade the answer to any such question, where the fact inquired of is within his knowledge, or who shall, upon proper demand, wilfully fail or refuse to exhibit to any commissioner or any

commissioners, or any person authorized to examine the same, any book, paper or account of such railroad, which is in his possession or under his control, shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than one hundred dollars nor more than one thousand dollars for each such offense, and a penalty of not less than five hundred dollars nor more than one thousand dollars shall be recovered from the railroad for each such offense when such officer, agent, or employee acted in obedience to the direction, instructions or request of such railroad or any general officer thereof.

Penalty for All Acts of Omission or Commission.

SEC. 28. If any railroad shall violate any provision of this act, or shall do any act herein prohibited, or shall fail, or refuse to perform any duty enjoined upon it, or upon failure of any railroad to place in operation any rate or joint rate, or do any other act herein prohibited, for which a penalty has not been provided, or shall fail, neglect or refuse to obey any lawful requirement or order made by the commission or any court (upon its application), for every such violation, failure or refusal, such railroad or railroads shall forfeit and pay into the state treasury a sum of not less than one hundred dollars nor more than ten thousand dollars for each offense. In construing and enforcing the provisions of this section, the act, omission or failure of any officer, agent, or other person acting for or employed by any railroad, acting within the scope of his employment shall in every case be deemed to be the act, omission or failure of such railroad.

Commission May Regulate All Practices.

SEC. 29. Whenever, after hearing and investigation as provided by this act, the commission shall find that any charge, regulation, or practice affecting the transportation of passengers or property, or any service in connection therewith, not hereinbefore specifically designated, is unreasonable or unjustly discriminatory, it shall have the power to regulate the same as provided in sections 12 and 14 of this act.

Commission To Be Immediately Notified of Fatal Accidents—Investigation.

SEC. 30. Every railroad shall, whenever an accident attendant with loss of human life occurs within this state, upon its line of road or on its depot grounds or yards, give immediate notice thereof to the commission. In the event of any such accident, the commission, if it deem the public interest requires it, shall cause an investigation to be made forthwith, which investigation shall be held in the locality of the accident, unless, for greater convenience of those concerned, it shall order such investigation to be held at some other place, and said investigation may be adjourned from place to place as may be found necessary and convenient. The commission shall seasonably notify an officer or station agent of the company of the time and place of the investigation. The cost of such investigation shall be certified by the chairman of the commission, and the same shall be audited and paid by the state in the same manner as other expenses are audited and paid and a record or file of said proceedings and evidence shall be kept by said commission.

Attorney-General and Prosecuting Attorneys Must Assist Commission.

SEC. 31. The commission shall inquire into any neglect or violation

of the laws of this state by any such railroad corporation hereinbefore defined doing business therein, or by the officers, agents or employees thereof, or by any person operating a railroad, and shall have the power and it shall be its duty to enforce the provisions of this act as well as all other laws relating to railroads and report all violations thereof to the attorney-general; upon request of the commission it shall be the duty of the attorney-general or the prosecuting attorney of the proper, or any, county to aid in any investigation, prosecution, hearing or trial had under the provisions of this act, and to institute and prosecute all necessary actions or proceedings for the enforcement of this act and all other laws of this state relating to railroads and for the punishment of all violations thereof. Any forfeiture or penalty herein provided shall be recovered and suit thereon shall be brought in the name of the State of Nevada in the district court of any county having jurisdiction of the defendant. The attorney-general of Nevada shall be the counsel in any proceeding, investigation, hearing or trial prosecuted or defended by the commission or any prosecuting attorney selected by said commission, or other special counsel furnished said commission, in any county where such action is pending.

All Claims for Damages May Be Investigated by Commission.

SEC. 32. All claims against any railroad for loss of or damage to property from any cause, or for overcharge upon any shipments, or for any other service, if not acted upon within ninety days from the date of the filing of such claim with the railroad, may be investigated by the commission, in its discretion, and the result of such investigation shall be duly recorded and filed in the archives of the commission, be open to examination by the public, and be embodied in the commission's next regular report. The regular reports of the commission shall be made to the governor annually as soon after the thirty-first day of December in each year as may be feasible in order to bring the report down to that date.

Printing Done at State Printing Office.

(a) It is hereby further provided that, except in cases of emergency, all the necessary printing of the commission shall be done at the state printing office, and it is made the duty of the state printer to have such printing done as expeditiously as possible. *As amended March 20, 1909.*

Technicalities Ignored.

SEC. 33. A substantial compliance with the requirements of this act shall be sufficient to give effect to all rules, orders, acts and regulations of the commission, and they shall not be declared inoperative, illegal or void for any omission of a technical nature in respect thereto.

This Act Shall Not Affect Any Suits at Law.

SEC. 34. This act shall not have the effect to release or waive any right of action by the state or by any person for any right, penalty, or forfeiture which may have arisen or which may hereafter arise under any law of this state; and all penalties and forfeitures accruing under this act shall be cumulative and a suit for, and recovery of, one shall not be a bar to the recovery of any other penalty.

Commission May Use Any Civil Remedy.

SEC. 35. In addition to all the other remedies provided by this act.

for the prevention and punishment of any and all violations as to the provisions hereof and all orders of the commission, the commission can compel compliance with the provisions of this act and of the orders of the commission by proceedings in mandamus, injunction or by other civil remedies.

Railroads Shall File Schedules.

SEC. 36. Every railroad in this state shall, within sixty days after the passage of this act, file in the office of the commission copies of all schedules of rates, including joint rates in force on its line or lines, between points within this state on the date this act takes effect.

This Act Construed.

SEC. 37. Each section of this act and every part of each section is hereby declared to be independent sections and parts of sections and the holding of any section or part thereof to be void or ineffective for any cause shall not be deemed to affect any other section or any part thereof.

Repeal.

SEC. 38. All acts and parts of acts in conflict with this act are hereby repealed.

RULES OF PRACTICE

For the proper and orderly exercise of the powers conferred by law upon the Railroad Commission of Nevada, the following rules of practice are hereby adopted, the eighth day of May, A. D. 1907:

RULE I

The general sessions of the commission for hearing contested cases, will be held at its office in Carson City, Nevada, on such days and at such hours as the commission may designate. When special sessions are to be held at other places, the commission will make such orders and regulations with reference thereto as may be necessary. All such hearings shall be public.

RULE II

Any person feeling himself aggrieved, by any railroad, telegraph, telephone or express company, or any common carrier, may file his complaint with the secretary of the commission. The secretary must indorse on the complaint the day, month and year that it is filed, and must, at the request of the party filing the same, issue a summons thereon. If such request be not made within three months after the filing of the complaint, the request shall be disregarded, but the party shall have leave, if he so desires, to file a new complaint. Both the complaint and the answer thereto shall be verified in the manner prescribed by the code of civil procedure of this state. The party complaining shall be known as the plaintiff.

RULE III.

The summons must be directed to the defendant, must be signed by the secretary, and attested by the seal of the commission, and must contain:

First—The names of the parties to the proceeding.

Second—A brief statement of the nature of the complaint.

Third—A direction that the defendant appear and answer the complaint within a time to be specified in the summons, which shall in no case be less than ten (10) days.

RULE IV

The summons may be served by any officer authorized by law to serve such process in civil proceedings, or by any male citizen of the state, and shall be served by delivering a copy thereof together with a copy of the complaint to the defendant; or, if the defendant is a corporation, to the president, secretary, treasurer, resident agent, managing agent, or other person in general charge of the company's business within this state, by whatever title he may be designated. Proof of such service shall be as follows:

If made by one of the officers aforesaid within the territory to which his official authority extends, by his certificate.

If by such officer outside of such territory, or by any other person, by his affidavit showing the time, place and manner of service.

RULE V

From the time of service of the summons and copy of complaint, the commission shall be deemed to have acquired jurisdiction of the parties and subject-matter. The voluntary appearance of the defendant shall be deemed a waiver of summons.

RULE VI

The complaint must contain:

First—The names of the parties to the proceedings.

Second—A statement of the alleged grievance in ordinary and concise language, giving such particulars of time, place and circumstance as will enable the defendant to answer the same intelligently.

Third—A demand for the relief claimed.

RULE VII

The plaintiff may embody as many causes in the same complaint as he may have, but the causes so embodied shall be separately stated so that each may be separately denied or objected to.

RULE VIII

The party complained against shall be known as the defendant, and within the time specified in the summons for answering, may file an objection, in the nature of a demurrer to the complaint upon the following grounds:

First—That it does not state facts sufficient to authorize the proceedings.

Second—If the complaint contains more than one cause or alleged grievance, that they are not separately stated.

Third—That the complaint is ambiguous, uncertain or unintelligible.

RULE IX

If the objection is sustained, the plaintiff may within ten (10) days after receiving written notice of the decision, amend his complaint. If the objection is overruled, the defendant may, within a like period, answer the complaint; *provided*, that if the party against whom such ruling is made is present when the commission makes its ruling, no written notice thereof shall be required, and the ten-day period shall begin to run at once.

RULE X

The answer of the defendant should contain:

First—A specific denial of each material allegation contained in the complaint.

Second—A statement of any new matter of defense, or matter in mitigation or explanation of the charges made in the complaint.

RULE XI

The plaintiff may within ten (10) days after the service of the answer object or demur to the same upon the following grounds:

First—That the facts therein stated do not constitute a defense.

Second—That it is ambiguous, uncertain or unintelligible.

RULE XII

The complaint, answer and demurrer must be subscribed by the party to the proceeding, or by some attorney at law on his behalf.

RULE XIII

The pleadings, summons, subpoenas, affidavits and all papers to be filed or used in any proceeding before the commission should be entitled:

“BEFORE THE RAILROAD COMMISSION OF NEVADA.”

All such papers should be either typewritten or printed, and when not printed only one side of the paper should be used.

RULE XIV

The testimony of any witness may be taken by deposition, at the instance of a party, in any proceedings or investigation before the commission, and at any time after the same is at issue. The commission may order testimony to be taken by deposition, in any proceeding or investigation pending before it, at any stage of such proceeding or investigation. Such deposition may be taken before any judge of any court of the United States, or any commissioner of a circuit, or any clerk of a district or circuit court, or any chancellor, justice or judge of a supreme or superior court, mayor or chief magistrate of a city, judge of a county court, or court of common pleas of any of the United States, or any notary public, not being of counsel or attorney to either of the parties, or otherwise interested in the proceeding or investigation. The same notice of taking deposition that is required by the laws of Nevada in taking depositions in civil cases must be given in writing by the party or his attorney proposing to take such deposition to the opposite party or his attorney of record, which notice shall state the name of the witness and the time and place of the taking of his deposition, and a copy of such notice shall be filed with the secretary.

When testimony is to be taken on behalf of a common carrier in any proceeding instituted by the commission on its own motion, notice

thereof, in writing, must be given by such carrier to the commission itself, or to such person as may have been previously designated by the commission to be served with such notice.

Every person whose deposition is taken shall be sworn (or may affirm, if he so request) to testify the whole truth, and shall be carefully examined. His testimony shall be reduced to writing, which may be type-writing, by the magistrate taking the deposition, or under his direction, and shall, after it has been reduced to writing, be subscribed by the witness.

RULE XV

Proposed findings embracing the material facts claimed to be established by the evidence, and referring to the particular part of the record relied upon to support each finding proposed, may be filed by each party. Printed or written arguments or briefs may be filed by any party. A copy of the proposed findings, brief or argument filed on behalf of any party, must at the same time be served upon the adverse party or parties, personally or by mail, and notice of such service thereupon filed with the secretary of the commission. The time within which proposed findings and printed or written arguments or briefs shall be filed in any case will be determined by the commission upon submission of the testimony.

RULE XVI

The commission will, at every stage of any proceeding before it, disregard any error or defect in the pleadings or other papers which do not affect the substantial rights of the parties. It will also be liberal in allowing such amendments of the pleadings as justice may require, and in enlarging the time, upon proper application, within which any pleading may be required. Sham or redundant matter in any pleading will be stricken out and disregarded.

RULE XVII

If the defendant fail to appear and answer the complaint, the commission will, at the time set for the hearing, proceed with the investigation, the same as if an answer had been duly filed. At such hearing the defendant may cross-examine the plaintiff's witnesses, and may offer testimony tending to disprove the allegations of the complaint, but will not be allowed to prove any new matter of defense that has not been pleaded.

RULE XVIII

Either party to the proceeding may, by leave of the commission, file a supplemental pleading. When such pleading is filed, the adverse party shall be given such time as the commission may prescribe in which to answer, demur, move to strike out, or take such other action as may be deemed proper in the premises.

RULE XIX

The secretary shall keep a calendar of the proceedings at issue, showing the status of each, and whether the issue be one of law or fact. Issues of law shall be first disposed of.

RULE XX

Either party upon not less than ten (10) days' notice to the other party, or the commission of its own motion, upon ten (10) days' notice

to both parties, may bring any proceeding to a hearing for the final disposition of the issue made, whether it be one of law or fact. But no such hearing shall be had without ten (10) days' notice of the time and place of the hearing, unless the parties themselves, with the concurrence of the commission, agree in writing upon a shorter time.

RULE XXI

Motions for postponement of a hearing will only be considered upon affidavit showing good and sufficient reasons therefor, and in determining what are good and sufficient reasons, the commission will be governed generally by the rules which prevail in courts of equity, reserving to itself the right to determine whether the application is made in good faith, for sufficient reason, or merely for delay.

RULE XXII

Any person having an interest in the subject-matter of a proceeding pending before the commission may, by leave of the commission, intervene at any time before the hearing upon the merits. When such leave is granted, the party intervening must file his pleading with the secretary, and serve a copy upon the adverse party, who shall have such time to plead thereto as may be fixed by the commission, which shall not be in any case less than ten (10) days.

The pleadings upon intervention shall be governed by the same rules as those which apply to the original pleadings in the proceedings.

RULE XXIII

Any party to a proceeding before the commission, feeling aggrieved at the final decision, may within sixty (60) days apply for a rehearing. Such application shall be in writing, filed with the secretary, and served by copy upon the adverse party, and may be made upon one or more of the following grounds:

First—Irregularity in the proceedings, or abuse of discretion whereby the party was prevented from having a fair hearing.

Second—Accident or surprise, which ordinary prudence could not have guarded against.

Third—Newly discovered evidence, material for the party making the application, which could not with reasonable diligence have been discovered and produced at the trial.

Fourth—Insufficiency of the evidence to justify the decision, or that it is against law.

When the application is made upon the first ground named, it shall be based upon affidavit showing clearly the irregularity or abuse of discretion complained of.

When made upon the second ground, it must be based upon affidavit showing the precise nature of the accident or surprise, and why it could not have been guarded against.

When made upon the third ground, it must be supported by affidavit showing the nature of the newly discovered evidence, its materiality, and why it could not have been produced at the hearing.

When made upon the fourth ground, it shall be sufficient to refer to the evidence contained in the record, and state generally wherein it is against law.

RULE XXIV

If the commission shall be of the opinion that a sufficient showing has been made to justify a rehearing, it will, in writing, notify all parties to the proceeding of the time and place of the rehearing, which shall be not less than ten (10) days, at which rehearing only such matters will be considered as have been made the basis of the application.

If the commission be of the opinion that the application is not well founded, it will deny the same, and so notify, in writing, the party applying. Upon a rehearing being granted the commission will affirm, reverse and vacate, or modify the decision or order complained of.

RULE XXV

A full and complete record shall be kept of all proceedings before the commission, and all the testimony shall be taken down by the stenographer appointed by the commission for the purpose.

A duly certified copy of such record, including the testimony, objections, rulings of the commission and exceptions noted, will be furnished free of cost to any party of record, and to all other persons a copy will be furnished at the actual cost of making the same.

Nothing herein shall be so construed as to require the stenographer to take down the arguments of counsel, beyond the simple statement of their objections and exceptions.

If any counsel desires his remarks reported in full, it may be done at his own expense, but such remarks will constitute no part of the record of the proceeding.

RULE XXVI

In ruling upon demurrers and independent motions the decisions of the commission may, in its discretion, either be oral and briefly noted in the secretary's minutes, or in writing.

The rulings made in the progress of a hearing or investigation, shall be taken down by the stenographer, and constitute a part of the record.

The final decision shall, in all cases, be in writing and embodied in the record as a part thereof.

RULE XXVII

Any railroad or transportation company, or any party affected by any order of the commission, shall be entitled to receive one certified copy of such order, free of charge, and additional copies will be furnished to any persons desiring the same at the actual cost of transcription.

RULE XXVIII

The noun "person" and the pronoun "his," wherever they occur in these rules, shall be construed to include corporations and firms, the singular and plural, the masculine, feminine and neuter genders.

RULE XXIX

These rules shall be in force on and after the fifteenth day of May, 1907. They may be amended at any meeting of the commission, and amendments so made shall go into effect sixty days thereafter.

FORMS

No. 1—Complaint

No. 3—Demurrer

No. 2—Answer

No. 4—Subpena

These forms may be used in cases to which they are applicable, with such alterations as the circumstances may render necessary:

BEFORE THE RAILROAD COMMISSION OF NEVADA Complaint

.....
against

The Railroad Company

The complaint of the above-named.....
respectfully shows:

1. (State occupation and place of business.)

.....
.....
.....

2. That the above-named railroad company is a common carrier, engaged in the transportation of persons and property by railroad between points in the State of Nevada and that, as such common carrier, said railroad company is subject to the provisions of Chapter 45 of the Nevada Statutes of 1907.

3. That (here state concisely the matters intended to be complained of, numbering each succeeding paragraph).

.....
.....
.....

Wherefore, petitioner prays that the aforesaid railroad company be required to answer the charges herein and that after due hearing and investigation an order be made commanding said railroad company to cease and desist from said violations of the acts referred to in said petition, and for such other and further order as the commission may deem necessary and just in the premises. (Prayer may be varied so as to ask for the ascertainment of lawful rates or practices, and an order requiring the carrier to conform thereto. If reparation for any wrong or injury be desired, the petitioner should state the nature and extent of the reparation he deems proper.)

.....
Petitioner.

BEFORE THE RAILROAD COMMISSION OF NEVADA
Answer

.....
against

The..... Railroad Company

The above-named defendant, for answer to the complaint in this proceeding, respectfully states:

1. That (here follow the usual admissions, denials, and averments. Continue numbering each succeeding paragraph).

Wherefore, the defendant prays that the complaint in this proceeding be dismissed.

The..... Railroad Company,
By E. F. (Title of officer.)

.....
Demurrer

In usual form, and entitled same as complaint and answer.

BEFORE THE RAILROAD COMMISSION OF NEVADA
Subpena

To.....

.....

You are hereby required to appear before..... in the matter of a complaint of....., on the..... day of....., 191., at..... o'clock..... m. at....., and bring with you then and there.....

Dated.....

[Seal]

.....
Commissioner.

.....
Attorney for.....

PART II

**Containing Report of Public Service Commission for
1914, Public Service Commission Law and
Rules, and Index for Both Reports**

STATE OF NEVADA

FOURTH ANNUAL REPORT

OF THE

**Public Service Commission
of Nevada**

1914

H. F. BARTINE - - - - - Chief Commissioner
J. F. SHAUGHNESSY - First Associate Commissioner
W. H. SIMMONS - Second Associate Commissioner
E. H. WALKER - - - - - Secretary
W. K. FREUDENBERGER - - - - Chief Engineer



CARSON CITY, NEVADA

STATE PRINTING OFFICE . . . JOE FARNSWORTH, SUPERINTENDENT

1915

FOURTH ANNUAL REPORT

OFFICE OF THE
PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, February 1, 1914.

HON. EMMET D. BOYLE, *Governor of Nevada.*

SIR: The Public Service Commission of Nevada, pursuant to law, makes this, its fourth, annual report.

The work of this Commission continues to grow. During the year 1913 a total of 27 cases were filed with the Commission, while 45 cases were so filed during the year 1914. None of the new cases considered by the Commission during the year 1914 were equal in magnitude to the Tonopah water case or that involving the charges for electric current made by the Nevada-California Power Company in the counties of Nye and Esmeralda, both of which cases were exhaustively considered and fully explained in our last annual report. Referring briefly to the two cases named, which were numbered respectively U-20 and U-44, it may be proper to say that the results have been even more favorable to the communities concerned than was suggested in our last annual report. By the closest calculations that we are able to make, it appears that the actual saving to the people of Tonopah by the reduction of water rates in that town was about \$23,000 per annum, while the savings to the people of Nye and Esmeralda Counties, as a whole, by the reductions made in the Nevada-California Power Company's rates, are by close approximation \$55,000 per annum, making a total in those two cases of \$78,000 yearly. It is very gratifying to the Commission to know that these substantial savings have been effected for the benefit of the users and consumers of water and electric current without a shadow of injustice to the public utilities rendering the respective services.

THE CARSON WATER CASE

In our last annual report extended mention was made of the case against the Carson Water Company. The opinions and orders were given in full on pages 242 to 249, inclusive. By the modified order in that case the water company was given the option to lay a twelve-inch main in lieu of of the seven-inch additional piping prescribed by the original order. Later, and informally, it was made to appear to the satisfaction of the Commission that the object in view, namely, that of increasing the pressure of water for fire purposes, would be fully subserved by laying a ten-inch main instead of the twelve-inch prescribed by the modified order, and the respondent water company having expressed a willingness to lay such ten-inch main, it was formally notified that it would be accepted by the Commission as a compliance with the order. The ten-inch main has been completely laid, and it is gratifying to be able to say that the results have fully met expectations. According to the best scientific information that the Commission can obtain, it has doubled the pressure for fire purposes within the limits of Carson City, a most important desideratum in any community.

WATER RATES IN CARSON CITY

Incidentally connected with the complaint of inadequate water pressure, a number of specific complaints were made of the charges to particular patrons for water in Carson City. As all of the rates charged by this company were flat rates, it was a difficult matter to deal with, and no attempt was made to finally determine the question of what the rates should be. The company has suggested that there is no method by which equitable and uniform rates can be established except by the installation of meters. To this the Commission can offer no objection, because, as has been stated in earlier reports, the meter system is generally recognized as proper wherever domestic water service is rendered. A goodly number of meters have already been installed, and the Commission has reason to believe that at no distant day the installation will cover the entire city.

A few individual cases, however, of apparent overcharge were dealt with specifically by the Commission, and reductions made in the rates which appear to be satisfactory to most of the complainants and measurably so to all of them. With the metering of the city completed the Commission will be prepared to take up and consider intelligently the whole question of water rates.

TRUCKEE RIVER GENERAL ELECTRIC CASE

A case of very considerable importance determined by the Commission during the past year is that entitled "Public Service Commission of Nevada v. The Truckee River General Electric Company."

Complaints having been made of the charges of said company for electric current for power purposes, the Commission decided to investigate the matter upon its own motion. The case was therefore taken up formally. In a later portion of this report, the opinion and order appear in full. The case only covered a comparatively small portion of the defendant company's business, and the total amount of the reduction was not large, but it was very substantial, and very satisfactory to the users of electric current for power purposes.

THE WATER SUPPLY OF RENO

Probably one of the most important cases with which the Commission has thus far had to deal is the one entitled "The City of Reno, *et al.*, v. The Reno Power, Light and Water Company." This case is not important in the sense that it has effected any reduction in rates, but it was of vast importance in its bearing upon the quality of the water served by the defendant company to the people of Reno.

The complaint was that the water was unduly turbid, especially after storms, that it was contaminated by sewage which was discharged into the source of supply, and that at times it had been found to contain bacteria which might be productive of disease. Clearly nothing can be more essential to a community than to get a supply of clear and healthful water. It is not only a matter which peculiarly concerns the health of the immediate residents, but one which has a direct bearing upon its future growth. Realizing fully the importance of the case, the Commission gave to it the most thorough and exhaustive investigation. The scientific testimony introduced was of the very highest character, and the transcript of the case probably contains the best general discussion of the subject of purification and clarification of water for domestic

use to be found in any authoritative form in the public records of this State.

The case was presented to the Commission with consummate ability by Attorney Lunsford on behalf of the city of Reno, and just as well defended by counsel for the water company. As a result the Commission made an order requiring the company to establish two plants, one for the clarifying and settling of the water which the company furnishes to the cities of Reno and Sparks, and the other for a sterilizing plant of approved type for the eradication and destruction of all disease germs that the water might contain. The opinion and order are given later in this report, and explain the case fully. The order has been complied with by the defendant company. Both plants have been installed, are in regular operation, and the results are in the highest degree gratifying. The improvement in the general condition and character of the water supply of Reno is decidedly marked, and the Commission has heard nothing in the way of complaint, but much expressive of satisfaction, since the installation of the said plants.

WATER FOR FIRE SERVICE IN TONOPAH

At the closing of our last annual report we had reason to believe that the questions at issue between the Water Company of Tonopah and the town had been practically settled. Later on it was ascertained that the parties were still in dispute as to their respective duties in the matter of furnishing water for fire protection. An informal conference was held between the Chief Commissioner, a majority of the County Commissioners of Nye County, and the representatives of the water company. The Commission's Engineer, W. K. Freudenberger, was also present and took part in the conference. Both the water company and the county authorities were given to understand that, while it was the duty of the water company to furnish water for fire purposes, any expense incurred in the providing of better facilities for the utilization of the water would have to be paid for. The Commission was led to the conclusion from the general tenor of the discussion that the county would provide necessary appliances. Engineer Freudenberger furnished an estimate of the probable expense, and we supposed that this phase of the water situation had been disposed of. Recently, however, complaint has been made which goes to the question of which party should make provision for the connections between the mains leading from the fire tanks to the distributing mains. This matter calls for further investigation, and will be taken care of at an early day.

WATER RATES IN GOLDFIELD

Several informal complaints have been made of the charges for water in the town of Goldfield. Finally, a specific complaint was filed with the Commission and a citation was duly issued to the water company to answer the same. The water company, defendant, has filed a demurrer to the complaint, which demurrer will be disposed of very soon, probably before this report is in print. The matter will come to a final hearing at the earliest possible day.

SEWER SERVICE IN TONOPAH

The character of the sewer service in Tonopah and the charges therefor have been in dispute for a considerable period of time. It has been a difficult matter to deal with, for the reason that the earnings of the

company have been small, a goodly portion of the town not being connected with the sewer system at all. This matter was taken up on formal complaints made by S. R. Moore & Co. The testimony introduced was voluminous and covered the situation in nearly all of its varied aspects. There was long delay in the filing of the briefs, as a result of which other matters came before the Commission and secured precedence. Hence there has been no final decision as yet, but the case will soon be disposed of. The sewer service in Tonopah is a matter of very great importance. The proper decision of the case as made requires the greatest care. The Commission feels that upon the one hand the company should use every effort to render the best possible service, while upon the other hand the conclusion cannot be avoided that the people of Tonopah should aid the company in the rendering of this service by making connections wherever feasible. Obviously, the larger the business of the sewer company the better and the more equitable rates it can afford to establish, and the better service it can render.

STEAMBOAT CANAL CASE

This case is unique in the work of the Commission, being the only one involving charges for irrigation purposes that the Commission has been called upon to deal with. The Steamboat Canal or Ditch extends from the Truckee River at a point above Verdi along the side of the hill to the neighborhood of Steamboat Springs, and is about thirty miles in length. It has been in operation something like thirty years. Its purpose was to furnish water to ranchers owning or occupying lands along the line of the ditch. As a private venture it was never a business success. On one occasion it was sold at Sheriff's sale for the comparatively small sum of \$20,000, a mere fraction of what its construction cost. In the spring of 1913 a dispute arose between the farmers using the water and the owner of the ditch on the subject of water rates. It appeared that the ditch company proposed to increase the rates. Before any actual increase was made, however, quite a number of the farmers filed complaint with the Commission alleging that the rates already in effect were excessive, and asking the Commission to establish rates that would be reasonable and fair.

The defendant company answered, alleging that the rates as charged were not excessive, but on the contrary that they were too low, and asking the Commission to make an order fixing rates that would yield to the company 8 per cent return upon the fair value of the ditch. After the most careful consideration, the Commission felt constrained to deny the prayers of both the complaint and the answer. It did not appear to the Commission that under the conditions existing with reference to this particular ditch, and throughout the irrigation district in which it is located, the rates in effect were unreasonable or excessive. On the other hand, the Commission could not see its way clear to allow any increase under the case as made. Accordingly an order was made, denying either a reduction or an increase, and dismissing the case. The opinion and order are given in full, later in this report.

NEVADA-CALIFORNIA CONTRACT RATES AND MEASUREMENT OF ELECTRICITY

Since the decision of the Nevada-California Power case, some complex questions have arisen out of their rules and practices with reference to

contracts and method of measurement of electric current furnished to consumers for power. At the time the order was made a number of contracts were in existence between the company and some rather large users of electric current. The schedules as prescribed by the Commission were in some cases higher than these contract rates. Necessarily disputes have arisen with regard to them. After the promulgation of the order above referred to, the company established the rule of always measuring the current upon the primary side of the consumer's transformer, whereas previously, in many cases, the measurement had been made upon the secondary side. This makes a considerable difference in the amount of the charge, as there is a loss of electric current in passing through the transformer. This whole matter has been made the subject of careful investigation, and the Commission hopes to be able to render its decision in the not distant future.

THE PUBLIC SERVICE COMMISSION LAW

It seems proper once more to advert to the fact that the Public Service Commission Law of this State, in substance and effect, is merely an extension of the jurisdiction of the Railroad Commission to other classes of utilities than those named in the Railroad Commission Law. The Railroad Commission is made, *ex officio*, a Public Service Commission. The segregation is merely nominal. The appropriations are made separately, but the personnel of the two Commissions is the same. This is true, not only of the Commissioners themselves, but with respect to the Secretary and the entire office force, all of whom give their time as needed to the work of both Commissions. It is impossible to entirely segregate the expenses, for the reason that the work necessarily overlaps. During a given day the same employee will work on matter pertaining to both Commissions.

In the very nature of the situation the Commissions have been compelled to apply the expenses to the work of the two Commissions according to their own best judgment. For example, during one month a certain employee's salary may be charged up against the Railroad Commission, while another month that same employee will derive his salary from the appropriation for the support of the Public Service Commission. It is believed, though, that the apportionment has been made very fairly and equitably. Certain it is that the close connection between the two Commissions makes for economy. As has been stated in the Railroad Commission report, the total expense of the two Commissions is about \$25,000 per annum, while the total annual saving effected by the two is about \$840,000. It is very doubtful if a similar record can be found in the work of the Railroad or Public Service Commission of any other American State.

In this connection it may be well to suggest that it is not the sole or even the primary purpose of the work of any public-service commission to reduce the revenues of public utilities. So far as such commissions deal with matters affecting the revenues of the utilities, the purpose is to secure reasonable rates and charges and also good service. The effect upon the revenue is incidental, and, as already stated, not the primary purpose of the action of the commission. There are many cases in which a public-service corporation realizes large returns upon the basis of what are comparatively low rates; that is because of the volume and extent of its business, and, perchance, its favorable location. On the other hand,

many cases may be found in which public utilities charge what upon their face appear to be exorbitant rates, and which are so when considered by the general standard of comparisons. At the same time its revenue may be exceedingly small; in fact, very much less than what would ordinarily be regarded as a fair return upon the value of the property used in the service. This is due to the peculiar circumstances and conditions under which the service is rendered, among which is, of course and of paramount importance, the volume of its business. It is a settled rule that, in determining what are reasonable charges for the public-service corporation to make, all the attendant circumstances in the rendering of the service must be given consideration.

These observations are made merely to emphasize the fact that neither the Railroad nor the Public Service Commission has undertaken to cut rates merely for the purpose of reducing the revenues of the corporations engaged in the service of the public. To do so would be to act, as we view it, upon incorrect and unsound principles. The savings which have been effected through the reductions of rates, amounting, as before stated, to something like \$840,000 a year, are referred to for the purpose of meeting objections which are sometimes heard that the Commissions are expensive additions to our State Government, and are not worth to the people what it costs to maintain them.

It is not every cutting down of expenses that is a true economy. Almost any business concern can reduce its actual expenditure of money by either discharging its working force entirely, or reducing the wages of employees. But it would not follow, by any means, that a true economy had been effected. Just so with the affairs of a State. Something more must be considered than the mere outlay of money. In some branches or departments of government it is impossible to figure in money how much those branches or departments are worth to the State. Who, for example, can place a money value upon the service of the Governor, the Secretary of State, the Controller, the Treasurer, the Superintendent of Public Instruction, or of those officers connected with the Judicial Department? And yet we all know that those departments are in the highest degree essential for the well-being of the people of the Commonwealth. Without such officials we would in fact have no State Government at all, and neither life nor property would be safe for a single day.

The foregoing considerations apply to the work of Commissions, just the same; but in addition to those considerations the Railroad and Public Service Commissions can point to actual savings to the people aggregating the sum named, so that if there be any one who feels disposed to question the wisdom of the Railroad Commission and Public Service Acts of this State, he should find a full answer to any objection which he may have to offer on the score of expense by a simple glance at the other side of the account, namely, the saving to the people.

The Railroad Commission, acting in its dual capacity, has no apologies to offer for its existence, and no pleas to make in defense of its work. All that it asks is a fair and impartial consideration by the people of this State of what it has actually accomplished.

Following is an itemized reference to the various cases acted upon by the Commission, including the full opinions and orders in the more important of those cases:

Case No. 12—Poor Voltage Regulation in Reno.

This case was referred to in the Commission's first annual report at page 317. The voltage regulation has been so improved as to satisfy complainant in this proceeding, and as no further complaints have been received from other parties in the city of Reno relative to such voltage regulation, the case was formally closed at a regular meeting of the Commission held December 26, 1914.

Case No. 42—Alleged Inadequate Water Supply and Inadequate Water Pressure in Carson City.

The details of this case are fully set forth in the Commission's third annual report, a final decision having been rendered on January 3, 1914. The opinion and order was published on page 242 of the report above referred to. Further matters pertaining to this case will be found on preceding pages in this report.

Case No. 44—Alleged Excessive Electric Rates Charged by the Nevada-California Power Company.

This case is referred to on pages 322-323 of the Commission's third annual report. The opinion and order in the same is published in full at page 261 of the same report, having been rendered January 29, 1914.

Case No. 47—Alleged Excessive Rates.

This case was consolidated with Case No. 44, above referred, to and was disposed of by the opinion and order in that proceeding.

Case No. 48—Electric-Power Rates of the Truckee River General Electric Company.

The original complaint in this proceeding was received from W. B. Sayers, representing the Nevada Mining, Reduction and Power Company of Dayton, Nevada, on July 29, 1913, making informal complaint against the Truckee River General Electric Company, alleging unreasonable and excessive power rates. The Commission, on its own motion, took this case up formally at a later date. The hearing in this proceeding took place October 11, 1913.

The Commission's opinion and order was entered May 27, 1914, and reads as follows:

[Case U-48]

BEFORE THE PUBLIC SERVICE COMMISSION

PUBLIC SERVICE COMMISSION OF NEVADA, *Complainant*,

v.

TRUCKEE RIVER GENERAL ELECTRIC COMPANY, *Respondent*.

Appearances:

Mr. J. F. Shaughnessy, First Associate Commissioner, Acting Chairman.

Mr. W. H. Simmons, Second Associate Commissioner, *in pro. per.*, on behalf of the Commission.

Mr. W. B. Sayers, representing Nevada Mining, Reduction and Power Company.

Mr. Geo. A. Campbell, manager Truckee River General Electric Company.

OPINION AND ORDER

BARTINE, *Chief Commissioner*:

This proceeding was brought by the Commission upon its own motion as a result of a complaint previously made by Mr. W. B. Sayers, representing the Nevada Mining, Reduction and Power Company. Mr. Sayers's complaint was of an overcharge made by the respondent company, against the company which he (Sayers) represented, for electric current furnished for power purposes. It being

impracticable to cover the case of power rates, generally, upon the basis of Mr. Sayers's complaint, the Commission initiated a new proceeding in order that the whole matter of power rates might be fairly and comprehensively treated.

The notice and citation to the respondent company is as follows:

BEFORE THE PUBLIC SERVICE COMMISSION OF NEVADA
PUBLIC SERVICE COMMISSION OF NEVADA, *Complainant*,
v.
THE TRUCKEE RIVER GENERAL ELECTRIC COMPANY, *Respondent*.

NOTICE AND CITATION

To the Above-Named Respondent, Greeting:

You are hereby notified that, complaints having been made of your charges for electric current for power purposes, both as to the method of charging, the amount of the charges, and your regulations and practices in rendering the service, this Commission has decided to investigate the same upon its own motion. You are further notified that such investigation will begin at the office of the Commission in Carson City, Nevada, on the 22d day of August, 1913, at 11 a. m. of said day, and that it will cover all of your rates and charges for installed horsepower, and all of your rules and regulations respecting the same. You are formally cited to appear at such investigation, and take such part therein, and make such showing upon your own behalf as you may desire to, and as your interests seem to require.

[SEAL] PUBLIC SERVICE COMMISSION OF NEVADA,
Dated July 29, 1913. By E. H. WALKER, *Secretary*.

On Saturday, October 11, 1913, the case came to a final hearing. Mr. W. B. Sayers, Mr. H. P. Gillette, and Mr. John C. Black were sworn as witnesses.

The appraisal of the respondent company's property, as made by Mr. H. P. Gillette, was offered in evidence as an exhibit.

Near the close of the proceeding it was agreed by and between the Commission, the respondent company, and Mr. W. B. Sayers, the original complainant, that the respondent company's engineer, together with the Commission's engineer, Mr. W. K. Freudenberger, might confer together and, as nearly as possible, come to an agreement upon a modified schedule of rates, the same to be submitted to Mr. W. B. Sayers.

Accordingly, conferences took place between Mr. J. C. Black, acting on behalf of the respondent company, and Mr. W. K. Freudenberger.

The two engineers, while not very wide apart in their proposed schedules, were, nevertheless, unable to agree, and it therefore becomes necessary for the Commission, acting upon the basis of the testimony introduced and the records in the case, to fix and determine what appears to be a reasonable schedule of rates for power service.

The power rates of the respondent company, now in effect, are as follows:

METER RATES: Power and all other purposes, except connected Lighting Load, is not to exceed 10 per cent of Other Connected Load.

First	300 KWH	5.0c per KWH
Next	300 KWH	4.0c per KWH
Next	400 KWH	3.0c per KWH
Next	1,000 KWH	2.0c per KWH
Next	8,000 KWH	1.8c per KWH
Next	10,000 KWH	1.7c per KWH
Next	30,000 KWH	1.6c per KWH
All excess	over 50,000 KWH	1.5c per KWH

Additional charge for motors used directly for hoisting purposes of \$2.50 per average maximum tested horsepower per month.

Minimum Monthly Charge: \$1.10 per horsepower connected for all motors, excepting motors used for hoisting purposes, and not less than \$3.30.

Discounts: 10% when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformer and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth day of month next following that for which bill is rendered.

For power and all other purposes except connected Lighting Load is not to exceed 10% of Other Connected Load.

Term of Contract: Not less than five years.

Minimum Monthly Charge: \$1.10 per rated horsepower of motors installed except motors used for hoisting purposes, and not less than \$3.30.

Rates as follows:

For first	300 KWH	5.0c per KWH
For next	300 KWH	4.0c per KWH
For next	400 KWH	3.0c per KWH
For next	1,000 KWH	2.0c per KWH
For next	8,000 KWH	1.8c per KWH
For next	10,000 KWH	1.7c per KWH
For next	30,000 KWH	1.6c per KWH
For all excess over	50,000 KWH	1.5c per KWH

Additional charge of \$1.25 per month per average maximum tested horsepower input to each hoist motor, when operating at full speed with load.

Discount: 10% on the above rates when the customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth of the month next following that for which bill is rendered.

For consumer controlling reduction works, which run twenty-four hours a day, also for mines which are controlled by the same party that controls such reduction works, and whose outputs are treated at such reduction works. Current to be furnished and metered at 2,200 volts or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five years.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500 during the months of April to November, inclusive, except that the minimum may be discontinued for such period of time during which no current is used, provided the consumer gives 60 days' written notice.

Rate: 1.07c per KWH plus an additional charge of \$2.25 per month per average maximum tested horsepower input to each hoist motor.

Discounts: 10% on the above rates when payments are made on or before the fifteenth of the month next following that for which bill is rendered.

SUPPLEMENT TO ABOVE SCHEDULE

For power and all other purposes, except Connected Lighting Load, is not to exceed 10% of Other Connected Load. Plant to run twenty-four (24) hours a day and such motors that run less than twenty-four (24) hours a day are not to be run between the hours of 5 p. m. to 10 p. m. daily during the months of November to March, inclusive. Current to be furnished and metered at 2,200 volts or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five (5) years.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500.

Rate:

For first	50,000 KWH per month	1.2c per KWH
All excess over	50,000 KWH per month	1.0c per KWH

Plus an additional charge of \$2.25 per month per average maximum tested horsepower input to each hoist motor when operating at full speed with load.

Discount: 10% on the above rate when payments are made on or before the fifteenth of the month next following that for which bill is rendered.

For Irrigation Purposes: Power not to be used between the hours of 6 to 11 p. m. daily and only during the months from April to October, inclusive, of each year. Power to be supplied and metered at 2,200 volts or supplied at transmission voltage and metered on the low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five years.

Minimum: \$3 per season per rated horsepower of motors connected, or per rated installed capacity of high-tension transformers figured in kilovolt amperes, if they exceed by 50% the rated capacity of motors connected.

Rates as follows:

For first	5,000 KWH	1.7c per KWH
For next	5,000 KWH	1.5c per KWH
For next	20,000 KWH	1.3c per KWH
For all excess over	30,000 KWH	1.2c per KWH

Discounts: 10% on the above rates where payments are made on or before the fifteenth of the month next following that for which bill is rendered.

Meter Rate—Any and all purposes:

First	150 KWH	7.0c per KWH
Next	100 KWH	6.5c per KWH
Next	100 KWH	6.0c per KWH
Next	100 KWH	5.5c per KWH
Next	100 KWH	5.0c per KWH
All excess over	550 KWH	4.5c per KWH

Minimum monthly charge, \$1.

Discounts, None.

With reference to the foregoing schedule of rates, the respondent company offers evidence in the form of an exhibit showing that its power rates are low by comparison with those in effect at Tonopah, Goldfield, Las Vegas, Ely, and other points in Nevada. This Commission fully recognizes the fact that comparisons are evidence. But it also understands that to give comparisons any particular

weight in the determination of a case, such comparisons must be made between places where conditions are substantially the same. Obviously conditions in the mining camps of Nevada are essentially different from those existing at Reno and in the territory served by the respondent company.

In the new mining districts prices generally are high. Wages are high. Charges for professional services are high. Everything is upon a high-price level because of the uncertain conditions prevailing. Again, comparisons with such points as Elko, Las Vegas, Mason, and Aurora, places named in respondent's exhibit, are not especially appealing, because all of those places are much smaller, and do not furnish a fair standard by which to determine the reasonableness of rates to be charged by a great company like the respondent, serving an opulent, populous, and permanent section of the country.

Reno is the commercial metropolis of Nevada. Whether its growth hereafter be rapid or slow, it seems bound to retain a permanent commercial preeminence; its future is probably as well assured as that of any other city of the same size in the United States. Hence we feel that no fair comparison can be made between the rates which should be charged by the respondent company and those charged elsewhere in the State of Nevada, because there is, literally, no similarity of conditions. In some instances the rates are what may be called "mining camp rates," while in others they are relatively high rates which are almost invariably applied where the service is rendered to small communities. The respondent company virtually stands in a class by itself as far as the State of Nevada is concerned, and the Commission must reach its conclusion as to what are just and reasonable power rates by a consideration of all the circumstances and conditions under which the service is rendered.

Granting, arguendo, as has been claimed, that the respondent company may in the not distant future lose some of its larger customers at Virginia City and Gold Hill, where the Comstock mines are located, we still see no reason to suppose that there is going to be any marked falling off in the power business of the respondent company. The indications are that other demands will spring up as an offset to whatever may be lost, and that, upon the whole, the power business of the company will be fairly maintained, if not substantially increased. This, however, is all a matter that is in the future, and one that can be dealt with hereafter as actual changes occur.

We are not prepared to say that, considering this case with reference solely to the earnings and expenses of the respondent company, its net profits are excessive.

The following table shows its earnings and expenses for the three-year period of 1911, 1912, and 1913, as also the average:

	1911	1912	1913	Average
Operating revenues	\$251,735	\$297,513	\$331,456	\$293,568
Operating expenses	68,660	91,806	106,550	89,005
Net	\$183,075	\$205,707	\$224,906	\$204,563
Depreciation	36,810	49,095	61,330	49,095
	\$146,265	\$156,612	\$163,526	\$155,468

Taking Mr. Gillette's figures as a basis, the value of the company's property used and necessary in rendering the power service may be given in round numbers as \$2,000,000. A net income of \$155,468—the average for three years—is about 7.5 per cent. The year 1913 showed a net of 8 per cent. This, however, is giving the company the full water-right valuation as estimated by Mr. Gillette, namely, \$500,000. We feel that this is an overestimate.

It does not appear that the water controlled by the company, and used in rendering the service now under consideration, could be used in any other way that would give it a value even approximating the estimate of Mr. Gillette. Clearly a water right, for which there is only one use, and, consequently, one demand, is not so valuable as it would be with many uses and many demands for it.

If the present patronage of this company were to be withdrawn, it is difficult to see any other use to which its water rights and privileges could be put that would bring to it more than a small fraction of its present earnings. Obviously it would be unfair to the present patrons of the company to allow a valuation of \$500,000 for water rights over and above all the moneys invested in creating the appliances for the use of the water. It would, in effect, be requiring those presently being served to pay higher rates because of a water right which would have comparatively little value without their patronage. If it were necessary for us to determine specifically the value of the respondent company's water right, we should find ourselves in somewhat the same position that the courts

have been when called upon to fix the value of a franchise. In a number of such cases the courts, while recognizing the fact that a franchise has value, have been unable to say how much the value was, for the reason that there was no satisfactory evidence going to that point. The same difficulty exists with respect to the respondent company's water rights. As no standard has been presented that we can accept, we are left much in the dark as to the actual value of the water right separate and apart from the investment. We do not think that the earnings of the respondent company are a fair basis. If we were to accept the earnings of any public utility as proof of what its property is worth, we should in many cases be doing an injustice to the patrons of such utility. Other conditions being the same, it is clear that the higher the rates charged the greater will be the earnings, and, if we consider the earnings as furnishing a basis for the determination of the value of the property, we should be giving the utility the benefit of its own excessive rates—if they were excessive. Under such conditions a reduction of rates would generally be difficult, and, sometimes, impossible, because the higher the rates the greater the earnings; the greater the earnings the greater the value of the property, and this in turn would afford a reason for still higher rates. Thus the two principal factors in the equation would alternately and automatically work toward a higher level of valuations, rates, and charges.

Nor should we be inclined to attach much weight to estimates of water-right values based upon comparisons with steam plants in which some form of fuel is used. It is well known that water power is generally cheaper than steam, and where the less costly power is used by a public utility it is only just that its patrons should share in the benefits.

In this case, however, it is not necessary for us to pass specifically upon the actual value of the respondent company's water rights. As already stated, allowing them the full value given in Mr. Gillette's estimates, after allowing liberally for depreciation, the company would still have from $7\frac{1}{2}$ to 8 per cent net. If we reduce the water-right valuation to \$250,000, the earnings of the company would be 9 per cent. These are round figures and not intended to be mathematically exact. The change of schedules here proposed will not involve a heavy cut into the respondent company's revenues. The purpose of the order is not to reduce those revenues, either gross or net, but merely to bring about the application of rates which shall be fair and reasonable, *per se*, which we think the present rates are not.

Only a small percentage of the respondent company's business will be affected, and it is not at all improbable that the reductions made will lead to some increase in consumption whereby the revenues may be substantially maintained. The following is believed to be a fair and reasonable power schedule to be applied:

POWER SCHEDULE

SCHEDULE No. 1

For power and all other purposes, except Connected Lighting Load is not to exceed 10% of Other Connected Load.

Term of Contract: Not less than one year.

Rate:

For the first.....	300 KWH per month.....	4.5c per KWH
For the next.....	300 KWH per month.....	4.0c per KWH
For the next.....	400 KWH per month.....	3.0c per KWH
For the next.....	1,000 KWH per month.....	2.0c per KWH
For the next.....	8,000 KWH per month.....	1.8c per KWH
For the next.....	10,000 KWH per month.....	1.7c per KWH
For the next.....	30,000 KWH per month.....	1.6c per KWH
For all in excess of.....	50,000 KWH per month.....	1.5c per KWH

Additional charges of \$1.25 per month per average maximum tested horsepower input to each hoist motor, when operating at full speed with load.

Minimum Monthly Charge: \$1.10 per rated horsepower of motors installed except motors used for hoisting purposes.

Discounts: 10% on all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth day of the month next following that for which bill is rendered.

SCHEDULE No. 2

For Prospectors and Other Small Power Users

For power and all other purposes, except Connected Lighting Load is not to exceed 10% of Other Connected Load.

For the first.....	300 KWH per month.....	5.00c per KWH
For the next.....	300 KWH per month.....	4.50c per KWH
For the next.....	400 KWH per month.....	3.25c per KWH
For the next.....	1,000 KWH per month.....	2.25c per KWH
For all in excess of.....	2,000 KWH per month.....	2.00c per KWH

Minimum Monthly Charge: 25c per connected horsepower of motors.

Discounts: 10% on all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth day of the month next following that for which bill is rendered.

SCHEDULE No. 3
For Any and All Purposes

First	150 KWH	7.5c per KWH
Next	100 KWH	5.5c per KWH
Next	100 KWH	6.0c per KWH
Next	100 KWH	5.5c per KWH
Next	100 KWH	5.0c per KWH
All excess over	550 KWH	4.5c per KWH

Minimum Monthly Charge: \$1.

Discounts: None.

SCHEDULE No. 4
For Irrigation Purposes

Power not to be used between the hours of 6 to 11 p. m. daily and only during the months from April to October, inclusive, of each year. Power to be supplied and metered at 2,200 volts or supplied at transmission voltage and metered on the low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five years.

Rates:

For the first	5,000 KWH per month	1.7c per KWH
For the next	5,000 KWH per month	1.5c per KWH
For the next	20,000 KWH per month	1.3c per KWH
For all excess over	30,000 KWH per month	1.2c per KWH

Minimum: \$3 per season per rated horsepower of motors connected, or per rated installed capacity of high-tension transformers figured in kilovolt amperes, if they exceed by 50% the rated capacity of motors connected.

Discount: 10% on the above rates when payments are made on or before the fifteenth day of the month next following that for which the bill is rendered.

SCHEDULE No. 5
For Large Reduction Works

For consumer controlling reduction works which run twenty-four hours a day, also for mines which are controlled by the same party that controls such reduction works, and whose outputs are treated at such reduction works. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Rate: 1.07c per KWH plus an additional charge of \$2.25 per month for average maximum tested horsepower input to each hoist motor.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500 during the months of April to November, inclusive, except that the minimum may be discontinued for such period of time during which no current is used, provided the consumer gives 60 days' written notice.

Discounts: 10% on the above rates when payments are made on or before the fifteenth day of the month next following that for which the bill is rendered.

SCHEDULE No. 6
Supplement to Above

For power and all other purposes, except Connected Lighting Load is not to exceed 10% of Other Connected Load. Plant to run twenty-four (24) hours a day and such motors that run less than twenty-four (24) hours a day are not to be run between the hours of 5 p. m. to 10 p. m. daily, during the months of November to March, inclusive. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five (5) years.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500.

Rate:

For first	50,000 KWH per month	1.2c per KWH
For excess over	50,000 KWH per month	1.0c per KWH
Plus an additional charge of \$2.25 per month per average maximum tested horsepower input to each hoist motor when operating at full speed with load.		

Discount: 10% on the above rate when payments are made on or before the fifteenth of the month next following that for which bill is rendered.

ORDER
OFFICE OF THE PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, May 16, 1914.

Present—H. F. Bartine, Chief Commissioner; J. F. Shaughnessy, First Associate Commissioner; W. H. Simmons, Second Associate Commissioner; E. H. Walker, Secretary.

Pursuant to the conclusions reached in the foregoing opinion, it is hereby

Ordered, That on or before the 1st day of July, 1914, The Truckee River General Electric Company publish and put into effect the following schedule of rates:

POWER SCHEDULE

SCHEDULE No. 1

For power and all other purposes, except Connected Lighting Load is not to exceed 10% of Other Connected Load.

Term of Contract: Not less than one year.

Rate:

For the first.....	300 KWH per month.....	4.5c per KWH
For the next.....	300 KWH per month.....	4.0c per KWH
For the next.....	400 KWH per month.....	3.0c per KWH
For the next.....	1,000 KWH per month.....	2.0c per KWH
For the next.....	8,000 KWH per month.....	1.8c per KWH
For the next.....	10,000 KWH per month.....	1.7c per KWH
For the next.....	30,000 KWH per month.....	1.6c per KWH
For all in excess of.....	50,000 KWH per month.....	1.5c per KWH

Additional charges of \$1.25 per month per average maximum tested horsepower input to each hoist motor, when operating at full speed with load.

Minimum Monthly Charge: \$1.10 per rated horsepower of motors installed except motors used for hoisting purposes.

Discounts: 10% on all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts, or when customers furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth day of the month next following that for which bill is rendered.

SCHEDULE No. 2

For Prospectors and Other Small Power Users

For power and all other purposes, except Connected Lighting Load is not to exceed 1% of Other Connected Load.

For the first.....	300 KWH per month.....	5.00c per KWH
For the next.....	300 KWH per month.....	4.50c per KWH
For the next.....	400 KWH per month.....	3.25c per KWH
For the next.....	1,000 KWH per month.....	2.25c per KWH
For all in excess of.....	2,000 KWH per month.....	2.00c per KWH

Minimum Monthly Charge: 25c per connected horsepower of motors.

Discounts: 10% on all of the rates of this date of issue when customer uses current and company meters current at 2,200 volts, or when customer furnishes high-tension transformers and company meters current on low-tension side of transformers.

10% when bill is paid on or before the fifteenth day of the month next following that for which bill is rendered.

SCHEDULE No. 3

For Any and All Purposes

First.....	150 KWH.....	7.0c per KWH
Next.....	100 KWH.....	6.5c per KWH
Next.....	100 KWH.....	6.0c per KWH
Next.....	100 KWH.....	5.5c per KWH
Next.....	100 KWH.....	5.0c per KWH
All excess over.....	550 KWH.....	4.5c per KWH

Minimum Monthly Charge: \$1.

Discounts: None.

SCHEDULE No. 4

For Irrigation Purposes

Power not to be used between the hours of 6 to 11 p. m. daily and only during the months from April to October, inclusive, of each year. Power to be supplied and metered at 2,200 volts or supplied at transmission voltage and metered on the low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than five years.

Rate:

For the first.....	5,000 KWH per month.....	1.7c per KWH
For the next.....	5,000 KWH per month.....	1.6c per KWH
For the next.....	30,000 KWH per month.....	1.8c per KWH
For all excess over.....	30,000 KWH per month.....	1.2c per KWH

Minimum: \$3 per season per rated horsepower of motors connected, or per rated installed capacity of high-tension transformers figured in kilovolt amperes, if they exceed by 50% the rated capacity of motors connected.

Discount: 10% on the above rates when payments are made on or before the fifteenth day of the month next following that for which the bill is rendered.

SCHEDULE No. 5

For Large Reduction Works

For consumer controlling reduction works which run twenty-four hours a day, also for mines which are controlled by the same party that controls such reduction works, and whose outputs are treated at such reduction works. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Rate: 1.07c per KWH plus an additional charge of \$2.25 per month for average maximum tested horsepower input to each hoist motor.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500 during the months of April to November, inclusive, except that the minimum may be discontinued for such period of time during which no current is used, provided the customer gives 60 days' written notice.

Discounts: 10% on the above rates when payments are made on or before the fifteenth day of the month next following that for which the bill is rendered.

SCHEDULE No. 6

Supplement to Above

For power and all other purposes, except Connected Lighting Load is not to exceed 10% of Other Connected Load. Plant to run twenty-four (24) hours a day and such motors that run less than twenty-four (24) hours a day are not to be run between the hours of 5 p. m. to 10 p. m. daily, during the months of November to March, inclusive. Current to be furnished and metered at 2,200 volts, or furnished at transmission voltage and metered on low-tension side of consumer's high-tension transformers.

Term of Contract: Not less than (5) years.

Minimum Monthly Charge: \$1 per rated horsepower of motors connected and not less than \$500.

Rate:

For first 50,000 KWH per month.....1.2c per KWH
 For excess over 50,000 KWH per month.....1.0c per KWH
 Plus an additional charge of \$2.25 per month per average maximum tested horsepower input to each hoist motor when operating at full speed with load.

Discount: 10% on the above rate when payments are made on or before the fifteenth of the month next following that for which bill is rendered.

[SEAL]

Dated May 27, 1914.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.**Case No. 56—Alleged Excessive Minimum Charges for Water and Light Service.**

This case, entitled "Citizens of Winnemucca v. Winnemucca Water and Light Company," is referred to on page 324 of the Commission's third annual report. At the time of closing this report, the case had not been decided, but the opinion and order will be entered at an early date.

Case No. 57—Alleged Discriminatory Water Rates in Carson City.

The details of this case are set forth on page 324 of the Commission's third annual report. Under date of January 23, 1914, the Commission's opinion and order was entered, and the same has been complied with by the defendant company. The opinion and order reads as follows:

[Case U-57]

BEFORE THE PUBLIC SERVICE COMMISSION OF NEVADA

S. L. LEE, ET AL., *Complainants*,

v.

CARSON WATER COMPANY, *Respondent*.

Heard November 25, 1913. Decided June 23, 1914.

Appearances:

For Complainant—George Springmeyer (Massey & Springmeyer), S. L. Lee, H. H. Springmeyer, Alfred Karge, W. J. Maxwell.

For Respondent—Frank Murphy, attorney; Fred Cushing, superintendent.

OPINION

SHAUGHNESSY, *First Associate Commissioner:*

This proceeding arose upon complaint of S. L. Lee, *et al.*, and covers charges levied by the Carson Water Company against S. L. Lee, H. H. Springmeyer, Alfred Karge and L. H. Taylor, for residence use, including irrigation of lawns during the summer months, and against the Arlington Hotel for general use.

The complainant alleges that the charges are unjust, excessive, and discriminatory.

The case came on for hearing November 25, 1913, at which time it was shown that the rates were discriminatory by comparison with other services that the company renders under substantially similar circumstances and conditions.

The following comparisons are among those put in evidence before the Commission, showing the monthly charges made by the company, including the monthly consumption of water at the present time:

RESIDENCE SERVICE—	Present Charges		Present Monthly Consumption
	Summer Months	Winter Months	
S. L. Lee	\$5.00	\$4.00	26,100 gallons
H. H. Springmeyer	5.00	4.00	24,480 gallons
Alfred Karge	5.00	4.00	61,180 gallons
L. H. Taylor	5.00	4.00	56,350 gallons

RESIDENCE SERVICE—		Both Summer and Winter Months	
P. B. Ellis	-----	\$3.00	62,400 gallons
R. K. Colcord	-----	3.00	42,000 gallons
Mrs. R. Patterson	-----	2.50	71,000 gallons
H. F. Murray	-----	2.50	128,870 gallons
HOTEL SERVICE—		Present Monthly Charges	
Arlington Hotel	-----	\$40.00	320,000 gallons
Park Hotel	-----	12.00	148,800 gallons
Golden West Hotel	-----	15.00	110,000 gallons

The record does not show that there is any difference in the character of the service furnished to the above consumers and, as shown above, the ratio of use to charges is not sufficiently uniform to justify the discrimination complained of. On the contrary, the low-rate residence customers are the largest consumers of water.

In the face of such a state of facts, and without foreclosing the question as to the reasonableness of the company's rates as a whole, the Commission, under the provisions of section 17 of the Public Service Commission Law, is forced to find, and therefore does find, that the Carson Water Company's monthly charges for service to the said S. L. Lee, H. H. Springmeyer, Alfred Karge, and L. H. Taylor are unduly discriminatory and unlawful, and that for the future the said flat-rate monthly charges should not exceed three (\$3) dollars for each of said complainants in said residence class.

As to the hotel class of service, it is to be said that a comparison of the average consumption for the past six months shows the Arlington Hotel to be a much larger consumer of water than the Park and Golden West Hotels. But the character of service rendered by the company is the same in each instance, and when the ratio of use to charges is compared we find that the discrimination is undue, and we are therefore of the opinion that the flat rate charged should not exceed thirty (\$30) dollars per month for the future.

The burden of equalizing and maintaining a nondiscriminatory schedule of rates is upon the company, and when complaint is made and supported by evidence establishing the fact that the rates are discriminatory and it is found that the discrimination is undue, the Commission can do nothing other than remove it.

ORDER

OFFICE OF PUBLIC SERVICE COMMISSION OF NEVADA,
CARSON CITY, June 23, 1914.

Present—Chief Commissioner H. F. Bartine, First Associate Commissioner J. F. Shaughnessy, Second Associate Commissioner W. H. Simmons, Secretary E. H. Walker.

Pursuant to the views expressed in the foregoing opinion, it is hereby

Ordered, That on and after July 1, 1914, the flat-rate charges for residence water service, including the irrigation of lawns, rendered by the Carson Water Company to S. L. Lee, H. H. Springmeyer, Alfred Karge, and L. H. Taylor, shall not exceed three (\$3) per month. It is further

Ordered, That on and after July 1, 1914, the flat-rate charge for hotel water service rendered by the Carson Water Company shall not exceed thirty (\$30) dollars per month.

H. F. BARTINE, *Chief Commissioner*.

[SEAL]

J. F. SHAUGHNESSY, *First Associate Commissioner*.

W. H. SIMMONS, *Second Associate Commissioner*.

Attest: E. H. WALKER, *Secretary*.

Dated June 23, 1914.

Case No. 58—Alleged Excessive Rates for Sewer Service.

This case, entitled "Public Service Commission of Nevada v. Tonopah Sewer and Drainage Company," is referred to on pages 324-325 of the Commission's third annual report. After the hearing held in this proceeding, S. R. Moore and the Tonopah Sewer and Drainage Company were given permission to file briefs. There was a great deal of delay in filing these briefs, the last one not having been received by the Commission until late in the year 1914. In consequence, other cases were given

precedence. It is expected, however, that the opinion and order in this case will be rendered at an early date.

Case No. 61—Alleged Failure to Comply with the Order of This Commission.

The details of this case are set forth on page 325 of the Commission's third annual report. During the year 1914 it was consolidated with Case No. 63, which is later referred to in this report.

Case No. 62—Minimum Charges for Water Service in Elko.

January 13, 1914. A complaint was received from the Free Press Publishing Company against the Elko Water and Light Corporation, alleging excessive minimum charges for water service in Elko, Nevada. This complaint was purely informal in character, and after considerable correspondence relative to the same, complainant expressed the opinion that the entire rate situation for water service should be investigated, and stated further that a formal complaint would be filed.

At the time of closing this report the Commission has not received a formal complaint, therefore no further action has been taken.

Case No. 63—Quality of Water Supplied by the Reno Power, Light and Water Company.

January 28, 1914. The Commission received a complaint from the city of Reno, a municipal corporation, and from Fred J. Shair, as Mayor and individually, against the Reno Power, Light and Water Company, alleging that the water furnished by the defendant company was impure and detrimental to the health of the patrons of the company. Citation was regularly issued in this proceeding, and a hearing was held by the Commission in the city of Reno on March 13 and 14, 1914, at which evidence was taken on behalf of all parties concerned. The Commission entered its opinion and order May 27, 1914. The same has been fully complied with by the Reno Power, Light and Water Company.

The opinion and order reads as follows:

[Case U-63]

BEFORE THE PUBLIC SERVICE COMMISSION

CITY OF RENO (a Municipal Corporation) and FRED J. SHAIR, as Mayor of the said City of Reno, and Individually, *Complainants*,

v.

RENO POWER, LIGHT AND WATER COMPANY (a Corporation), *Defendant*.

OPINION AND ORDER

BARTINE, *Chief Commissioner*:

This case came on regularly for hearing at Reno, Nevada, March 13, 1914, and was completed on the following day.

The pleadings were formal and elaborate on both sides, although more or less argumentative. However, the issues were made sufficiently clear.

The substance of the complaint was that the defendant company, which is engaged in the business of supplying the said city of Reno with water, was not furnishing water of good quality for domestic use; that the said water was frequently turbid; that it had a bad taste, and that, at times, it had contained disease-breeding bacteria.

The answer of the defendant did not deny that the water was, at times, turbid, but it was alleged that such turbidity was caused by storms and conditions which it was impossible for the defendant company to control. The bad taste of the water was ascribed to the discharge into the Truckee River, one of the sources of the defendant company's supply, of refuse matter from the Floriston Paper Mills, located upon that stream, and above the defendant company's intake. The defendant company specifically denied that the water contained disease-

breeding bacteria in any appreciable or dangerous quantity, or at all. The defendant company also set up in its answer that its plant was worth a million dollars; that it was only realizing about $4\frac{1}{2}$ per cent net profit upon such valuation, and that, if required to install plants designed to improve the quality of the water, it should be permitted to increase its rates. At the hearing the testimony was confined almost, if not quite, entirely to the quality of the water. As we view it, the only question for the Commission to consider in this case is whether the water is of reasonable clearness and purity—the word “purity” being used to cover the whole question of whether it is of standard clearness, of good taste, and free from matter injurious to health.

VALUE OF PROPERTY, AND RATES, NOT IN ISSUE

Such being the questions to be determined, it does not appear that the valuation of the plant or the earnings of the company are elements to be passed upon in this case. Assuming that the plant is worth the full value claimed for it, and that the earnings are no more than $4\frac{1}{2}$ per cent net, still the defendant company is engaged in the business of serving the city of Reno with water for domestic purposes, and it is bound to furnish water of good quality, whether it makes any profit or not. In other words, a company furnishing a municipality with water for domestic use is not privileged to furnish water of poor quality, which is, or may be, offensive to the taste, of bad odor, or deleterious to health, simply because its profits are small, or, in fact, though it may be conducting its business at an actual loss. Under any circumstances the company is bound to make every reasonable effort to improve the water. Therefore the value of the plant and the earnings of the company will not be considered in this case. The quality of the water and the duties of the company with respect to it will be regarded as the sole issues for determination.

CHARACTER OF WATER GENERALLY

The defendant company obtains its water from two sources of supply—first, Hunter Creek, and, secondly, Truckee River. The testimony clearly proved that, the greater portion of the time, the water from the Truckee River source had a bad taste, and, occasionally, the same defect was noted in what was supposed to be the Hunter Creek water, which, speaking generally, serves the people of Reno upon the south side of the Truckee River.

The testimony on behalf of the defendant company tended strongly to show that this bad taste was mainly due to the discharge of refuse matter, containing a sulphite, from the Floriston Paper Mill into the Truckee River, above the defendant company's point of diversion, and some of the testimony on behalf of the defendant had a tendency to prove that the bad taste occasionally noted in the Hunter Creek water was caused by the connection of the two systems and the turning of the Truckee River water into the pipes that were usually filled from the Hunter Creek source. There was, however, considerable testimony to the effect that, at times, the water which certainly came from the Truckee River had a bad taste, and also an offensive odor, which apparently were not due to the matter discharged from the Floriston mill.

MAIN TROUBLE WITH TRUCKEE RIVER SUPPLY

It will not be necessary to analyze at any great length the testimony bearing upon these points, because it all tended in one direction, differing only in degree—some of the witnesses testifying more strongly than others. Besides, the defendant's answer substantially admits that the water is turbid at times; that it emits a disagreeable odor, and has an unpleasant taste, due, it is claimed, to the pollution of the Truckee River by the Floriston mill. I will, however, make brief reference to the testimony, but, before doing so, it may be well for me to touch lightly upon the conditions as they exist naturally in the watershed from which the supply is obtained. As already stated, there are two sources—Hunter Creek and Truckee River. With respect to the Hunter Creek supply very little need be said, because, apparently, there is but little cause for complaint with respect to the water from that source, except that it sometimes is muddy and frequently turbid, some of the witnesses distinguishing, or attempting to, between muddiness and turbidity. The main trouble seems to be in the supply that is obtained through the Highland Ditch from the Truckee River.

This river is the outlet of Lake Tahoe, and from that lake obtains the major portion of its water, although it also receives the flow of various small mountain streams on its course from the lake. Lake Tahoe is a large body of remarkably

deep, clear, and pure water. It is more than 20 miles in length, and about 15 in width, and probably averages several hundred feet in depth. The exceptional clearness and purity of the water are matters of general knowledge. Following its windings, the Truckee River pursues a course of something like 45 or 50 miles before it reaches Reno. It runs through a sparsely settled region, where comparatively few people live, and naturally the probability of contamination is not great. There is no apparent reason why, except for the Floriston mill, the inhabitants of Reno and Sparks, numbering together about 17,000, should not have a supply of as good water as any similar community in the entire country. Nevertheless, we are confronted by the fact that the water furnished is unsatisfactory to a large percentage of the people using it. The evidence shows that there is substantial reason for the dissatisfaction.

AS TO TURBIDITY

Now, a glance at the testimony bearing upon the turbidity, odor, and bad taste complained of: Without exception, the witnesses on behalf of the complainants testified that the water was sometimes muddy, one or two of them stating that occasionally it was so excessively muddy as to be unfit to bathe in. In this connection, however, the fact should be noted that these witnesses generally stated that the extreme muddiness prevailed immediately after storms, or at places that were disadvantageously located, and that the condition of the water under such circumstances was not a fair test of its general condition. All, or nearly all, of the witnesses, however, testified that the water was generally more or less muddy after storms, and that it was more or less murky all the time. One witness described it as having the appearance of water discolored by a few drops of milk.

TESTIMONY AS TO POLLUTION

The defendant company introduced in evidence a number of bottles filled with refuse liquid from the Floriston mill. These bottles, with their contents, were shown to several of the witnesses, who were asked if the odor was the same as that which they detected in the water. With one or, at the most, two exceptions, the witnesses all declared that the odor was not the same. They were not able to describe specifically just what the odor was which they detected in the water that was furnished to them by the company, but their testimony left the inference that it was due to some pollution other than that which was ascribed to the discharge from the Floriston mill. Two of the witnesses testified to the passage of remnants of dead fish through the pipes and a bad odor of the water at the same time. One witness testified that he had passed up and down the stream, and at the town of Verdi, and in that vicinity, he had observed sewage and seepage flowing into the river, also that he had noticed the carcasses of dead animals along the bank. All of this indicated very clearly that there must be some opportunities for pollution, and that there probably is pollution separate and apart from anything that results from the operation of the Floriston Paper Mill. In speaking of pollution in this connection, I do not mean to imply that it is a pollution of a character to produce disease-breeding bacteria, but merely that it makes the water, in a certain degree, offensive and distasteful.

I think that, upon the whole, the testimony very clearly shows that there is a necessity for the improvement of the water with respect to the various points now under consideration. This matter will be adverted to again later on in this opinion.

TESTIMONY AS TO HEALTHFULNESS OF WATER

I come now to a consideration of the testimony offered in this case bearing upon the question of the healthfulness of the water. The testimony upon this point was given, in the main, by five witnesses, namely, Dr. O. B. Johnstone, in charge of the State Hygienic Laboratory, Prof. S. C. Dinsmore, Commissioner of Foods and Drugs at the University of Nevada, Mr. L. O. Murphy, a professional bacteriologist, and engineer for the water company, C. G. Hyde, who is the Professor of Sanitary Engineering of the University of California, and Mr. H. A. Lemmon, the general agent of the Water Company. The first was called by the complainants, and was their chief witness upon this branch of the case. Prof. Dinsmore was called first by the complainants, and later was made a witness for the defendant. Messrs. Murphy, Hyde, and Lemmon were all witnesses in behalf of the defendant. Witness Lemmon gave no testimony of his own bearing directly upon the question of the quality of the water, but he produced statements or certificates coming from the State Board of Health, and from Dr. Donald Maclean, a

prominent physician of Carson City, with reference to the prevalence of typhoid fever in the city of Reno and Washoe County. These documents indicated that there was no more typhoid in the city of Reno and Washoe County than in other places, and, in fact, that it was rather less prevalent than the average throughout the State as a whole. It moreover appeared that, in part, at least, the typhoid cases known to exist in Reno originated elsewhere, the patients having been brought to that city for treatment.

PROF. DINSMORE

Prof. Dinsmore testified to having made many chemical analyses of the water. While these analyses were not of a character to determine fully all of the impurities which might be contained in the water, according to Prof. Dinsmore's statement they would disclose the presence of *B. Coli*, that form of bacteria which indicates sewage contamination. This witness testified that he had not found any traces of *B. Coli* in any of his analyses. The witness also testified to having sent a sample of the water for analysis to Curtis & Thompkins, chemists, of San Francisco, and another sample to Gould, Free & Ash, chemical engineers, of the same city, and presented the reports of both firms, showing that their analyses disclosed no *B. Coli*, and that it was good water, considered with respect to healthfulness. This witness also testified quite fully with reference to the pollution of the stream by the discharge from the Floriston mill, and gave it as his opinion, very firmly, that, while the refuse matter thus thrown into the river made the water more or less offensive to the taste and the smell, there was nothing in it that was deleterious to health. He outlined, at some length, a plan which was being considered by the owners of the Floriston mill for preventing the pollution of the water by the discharge of refuse matter into it. The plan under consideration, briefly stated, was a process of evaporation, by which the 60,000 gallons daily discharged would be reduced to 8,800 gallons, which residue could be disposed of for commercial uses, and not be permitted to enter the river. If this plan be carried out, it will certainly remove one very serious cause for complaint with respect to the quality of the water. This witness also testified, with respect to the Floriston pollution, that the chemical matter discharged into the river from the mill was of such character that it could not be precipitated; that it would remain in suspension indefinitely, and that, consequently, the only way to get rid of it was by some such process as that which he had described.

DR. JOHNSTONE'S ANALYSES

Dr. Johnstone testified to the effect that he had made a considerable number of analyses and had always found evidence of sewage contamination; he had only retained records of about three of these analyses, and these showed exceedingly high bacterial counts. One showed 50,000,000 per cubic centimeter, another 10,000 per cubic centimeter, and the lowest, 2,000 per cubic centimeter. From memory he gave 5,000 as the result of another analysis, the record of which he had not preserved. In this connection it is proper to observe that, despite these extraordinarily high numbers, Dr. Johnstone testified that it did not necessarily follow that the water was dangerous as a producer of typhoid or intestinal diseases; but he did say that it could become dangerous when combined with other conditions which might arise—in short, that the condition was not one of immediate danger, but which might become dangerous in the future.

Dr. Johnstone also stated that, being much interested in health conditions, he had made a number of analyses on his own account, preserving no records of them, but that he brought the matter to the attention of the health officers, and advised that all parties using the water for domestic purposes should boil it before drinking. This, he stated, was done as a precautionary measure.

WITNESS MURPHY'S ANALYSES

Witness Murphy testified that he had made bacteriological examinations three or four times a month, and found no traces of *B. Coli*. This witness testified to having sent a carefully prepared sample of the Truckee River water to Prof. C. G. Hyde, at the University of California, for bacteriological analysis.

PROF. HYDE'S TESTIMONY

Referring to the character of the Truckee River water, Prof. Hyde said that sanitary engineers regard with distrust all surface waters which come from sources which are not of three groups:

First, those which are so remote from human habitation that there can be no possibility of human contamination.

Secondly, those whose watersheds are owned in total by the community or corporation in question, so that all sources of contamination can be controlled.

Thirdly, those which have reservoirs so numerous that the storage period would definitely insure the destruction of all dangerous bacteria which would come from human sources.

That being the case, it was his judgment that this water supply should be sterilized. Further on, he said:

The Commission will realize that I have not admitted—and our results show that the water is not polluted by sewage organisms—I have merely said that we regard such waters with suspicion, and that they are potentially unsafe. We have no evidence that these waters have ever been unsafe to the people of Reno.

Still, he advised sterilization as a precautionary measure. On this particular point he and Dr. Johnstone were agreed in their final conclusions, because the latter did not claim that the water was actually unsafe, but merely that it might become so by a change of conditions.

Prof. Hyde indicated very plainly a disbelief in the high bacterial counts testified to by Dr. Johnstone, and, upon being recalled, the latter witness frankly stated that the higher counts to which he had testified were not fair samples—that they had been selected under exceptional conditions. In view of the conclusions reached it will not be necessary to refer further to the testimony along this line.

PLANS FOR CLARIFYING AND STERILIZATION

Prof. Hyde further gave it as his opinion that the standard of clearness set by this Commission—namely, maximum of 30, and a monthly average by daily readings of 15—was, under the conditions prevailing here, a reasonable standard. He gave, somewhat in detail, the plans of two systems—one for clarifying the water, and the other for purifying it by sterilization—which he had advised the defendant company to install.

For the purpose of removing the turbidity he had advised the installing of a coagulating plant which would have the effect of grouping the fine particles of matter together into larger masses, and causing them to precipitate. He estimated that the cost of constructing such a plant would be \$8,000, and that the annual cost of maintaining it would be \$2,600.

1. That the water has not been maintained at the standard of clearness prescribed by this Commission.

2. That it ought to be so maintained.

3. That the water in its present condition, does not contain disease germs in sufficient quantity, if at all, to be dangerous to health.

4. That the conditions are such that the water may become dangerous through pollution from human sources, from which character of pollution the germs dangerous to health and life almost invariably come.

5. For the purpose of bringing the water to the standard of clearness prescribed by the Commission, a coagulating or settling system of recognized standard should be installed.

6. That, as a safeguard against disease germs, a sterilization plant of recognized standard should be installed.

7. That the discharge of refuse matter from the Floriston mill has the effect of polluting the water in such manner as to make it distasteful and give it an unpleasant odor.

8. That the defendant company should make every possible effort to remove this defect.

For the purpose of sterilizing the water, and thus killing disease germs, he advised the construction of another plant, at the same cost, \$8,000, but the operation of which would entail an expense of \$4,100. Thus it appears that the total cost of installing the two plants would be \$12,000, and that after their installation their operation would add \$6,700 a year to the company's expense.

Counsel for the defendant company announced its readiness to install the plant recommended by Prof. Hyde. I should add further, in this connection, that Prof. Hyde declared that, in his opinion, a filtering system would not produce satisfactory results under the conditions existing on the Truckee, while it would be enormously more expensive.

Upon a careful review of all the material testimony introduced, the following conclusions are reached:

THE CASE WELL PRESENTED

At this point it is proper to observe that the case now under consideration was admirably handled by both sides. The City Attorney was well prepared, and his presentation of his side left nothing to be desired to make it complete. The defense was equally well conducted. So we are bound to assume that both sides presented everything that was deemed to be necessary in the making up of the case. Of course, there might have been a multiplication of witnesses, but it seems to the Commission that the testimony given fully covers the case in all of its essential features, and, upon the basis of the record as made, the case must be decided, regardless of all suppositions, conjectures, and suspicions as to the character of the water that may be indulged by individuals.

Considering the testimony as given, it appears to the Commission that it can with propriety give its approval to the plans for coagulation and sterilization proposed by Prof. Hyde, and which the defendant company expresses a willingness to adopt. It is not necessary that the order, as made, should specifically provide for the installation of such plants. It is enough to say that if the defendant company proceeds with reasonable diligence to make such installation, it will be accepted by this Commission as a compliance with the order to be made in this case, so far as it bears upon the questions of turbidity and healthfulness of the water.

OPERATION OF THE FLORISTON MILL

In closing this opinion it seems fitting that some specific reference should be made to the effect upon the waters of the Truckee by the discharge of refuse from the Floriston mill. The evidence demonstrated beyond all question that this discharge of 60,000 gallons of liquid daily, which liquid is heavily charged with a sulphite compound, imparts an unpleasant odor and a bad taste to the water. One requisite of a good water supply is that the water should be free from those defects. People using water for domestic purposes are entitled to, and expect to receive, water that has no offensive qualities whatever. Good taste and freedom from unpleasant odor are prime essentials. It is proper to say that, in the view of this Commission, the defendant company should make every effort, either acting independently, or by process of law, or in friendly cooperation with the owners of the Floriston mill, for the purpose of securing a cessation of this offensive discharge into the Truckee River. The evidence tended very strongly to show that the matter contained in this liquid is not injurious to health. Dr. Johnstone suggested that the presence of the chemicals might have a tendency to kill the disease germs, although upon this point he did not speak very definitely.

Incidentally it may be remarked that it is hard to see how any impurities in water, whether they be in the line of chemicals or vegetable or animal pollution, can be otherwise than more or less injurious to health, even though they may not be immediately productive of those diseases that are chiefly feared by man. It does seem, though, that any impurities in water must have some bad effect upon the human system. But, apart from all of this, the fact is clear, that the discharge from the Floriston mill makes the water offensive, and, in large measure, unfit for domestic use. Therefore the point is emphasized that the water company, upon which is devolved the obligation of furnishing the 17,000 people living in Reno and Sparks with a good supply of water, should make every effort to sustain that burden by procuring in some way a stoppage of this offensive flow into the Truckee River from the Floriston mill. Use for domestic consumption is the most important use to which water can be put. The very existence of towns and cities depends upon their water supply.

An order should be made in conformity with the view herein expressed.

ORDER

In accordance with the views expressed in the foregoing opinion, it is hereby

Ordered, That on or before the 1st day of July, 1914, the Reno Power, Light and Water Company begin the work of installing a plant of some approved type or character for the clarifying and settling of the water which said company furnishes to the cities of Reno and Sparks, in Washoe County, Nevada, which plant shall be adequate for the purposes of bringing such water to the standard of clearness prescribed by this Commission in its order to said company dated October 25, 1911, which standard is that the maximum turbidity of said water

shall not be greater than 30 parts in a million, and that the monthly average upon daily readings shall not exceed 15 parts in a million. It is further

Ordered, That on or before the date mentioned, the said company shall begin the work of installing a sterilizing plant of approved type or character for the eradication or destruction of all disease germs that said water may contain. It is still further

Ordered, That the work of constructing such plants shall be prosecuted with all due diligence, and the period of ninety days after the commencement of said work is hereby named as a reasonable time for its completion. It is further and separately

Ordered, That the defendant company proceed with all due diligence to abate the pollution of the said water by the discharge of refuse from the Floriston mill, and to bring the water served to the people of Reno and Sparks to a proper standard of taste and odor.

The period of four months is hereby designated as a reasonable time within which to complete the work last prescribed, and it is further

Specifically Provided, That the subdivision of this order which requires the abatement of the pollution of the water by the Floriston mill shall be construed as a separate and independent order, having no connection with the parts relative to the removal of turbidity and destruction of disease germs.

[SEAL]

Dated May 27, 1914.

PUBLIC SERVICE COMMISSION OF NEVADA,
By E. H. WALKER, *Secretary*.

Case No. 64—Overcharge on Electric-Power Bill.

Under date of February 10, 1914, a complaint was made to the Commission by R. A. Trimble of Dayton, Nevada, against the Truckee River General Electric Company. Mr. Trimble's complaint was based on a charge of \$16.50 for electric power for January, he having used only 13 KWH during that month. The bill was estimated on the basis of the use of a 15-horsepower motor at a minimum charge of \$1.10 per horsepower per month.

At the time this complaint was received, a decision had just been made in Case No. 48, covering the entire schedule of power rates for the Truckee River General Electric Company, in which the minimum monthly charge for power was reduced to 25 cents per horsepower per month. The power company was requested to apply this new rate in this case, thus making Mr. Trimble's bill \$3.75 instead of \$16.50. The company promptly agreed, and the case was satisfactorily adjusted.

Case No. 65—Alleging Excessive Electric-Light Bills.

On February 10, 1914, a letter was received from Mr. Robert Prouty of Tonopah, enclosing electric-light bills for his residence and drug-store for December, 1913, and January, 1914, and calling attention to the fact that his residence bill was \$5.60 for January, 1914, which was 20 per cent higher than for December, 1913.

A letter was addressed to Mr. Prouty advising him that it is quite general for considerable variation in electric-light bills to occur from month to month. He was also advised to have the company test his meters for accuracy.

No further communication was received from Mr. Prouty in this matter.

Case No. 66—Water Bill Complaint.

Complaint was made by Mrs. Minnie Abbott under date of February 15, 1914, against the Water Company of Tonopah. Complainant believed that she was not using as much water as she was being charged for. A test of her meter by Mr. T. R. Landsborough proved that it was registering correctly, and she was so notified.

Case No. 67—Accuracy of Electric Meter.

Complaint was made by Mrs. Minnie Abbott on February 15, 1914, against the Nevada-California Power Company alleging that her electric-light meter was registering too fast. At the request of the Commission this meter was tested by Mr. T. R. Landsborough, chief electrician of the Tonopah Extension Mining Company, and was found to be registering correctly. Mrs. Abbott was advised accordingly, and the case was closed.

Case No. 68—Alleged Overcharge on Electric Bills.

Mr. H. H. Bacon of Tonopah on February 20, 1914, made a complaint against the Nevada-California Power Company on account of his electric-light bills being materially larger some months than they were other months. A copy of the rules of the Commission governing the testing of meters was sent to Mr. Bacon, with the suggestion that he have the power company test his meters for accuracy, and if not satisfied with such a test to call on the Commission for a check of the same. Nothing further being heard from complainant, the case was closed.

Case No. 69—Alleged Overcharge on Electric Bill.

A complaint was made by Ryan & Stenson against the Nevada-California Power Company, alleging an overcharge on electric-light bill. Complainants were advised to request the power company to test their meter, and if not satisfied with the results of such test to call on the Commission and a check test would be made. No further communication was received from complainants.

Case No. 70—Electric-Power Bill Complaint.

A complaint was received from the Manhattan Consolidated Mines Development Company of Manhattan, dated March 11, 1914, signed by C. C. Boak, its secretary, against the Nevada-California Power Company. Complainant alleged that they had been billed for more power than had been used, and asked to have the meter tested. A copy of the complaint was forwarded to the power company with the request that the meter be tested and a thorough investigation of the matter be made, the findings to be reported to this Commission. The power company immediately tested the meter and made the investigation and reported that the meter was found to be registering correctly. The report also stated that the excessive use of power was found to be due to losses in customer's large transformers. This report was forwarded to complainant, and nothing further was heard from him about it.

Case No. 71—Electric-Power Rates.

Complaint was made March 18, 1914, by the Water Company of Tonopah, through its attorney, Mr. H. R. Cooke, against the Nevada-California Power Company. Complainant stated that the power company continued billing at the old rates after the rates were reduced by this Commission in Case No. 44. On conferring with the power company it was found that it was through a misunderstanding of the Commission's order that the old rates were still being applied in this case. When the new rates were explained to the power company, the proper rates were promptly applied, and the case was closed.

Case No. 72—Charge for Sewer Service.

A complaint was received from Mrs. M. Harrington, dated March 20, 1914, against the Tonopah Sewer and Drainage Company. Mrs.

Harrington objected to a charge of \$23 per month for sewer service at her rooming-house. This charge was strongly objected to, because the bathroom and toilet were for private use only, and were not used by the roomers. The case was decided by an order of the Commission, making her rate the same as for boarding-houses, which is \$10 per month.

Case No. 73—Minimum Charge for Water.

A complaint was received, dated April 1, 1914, from P. F. Beardsley against the Water Company of Tonopah, on account of the minimum charge of \$2 per month for water service. Mr. Beardsley used only 375 gallons of water in March and believed that the \$3.25 rate should apply in his case, which would have made his bill \$1.25 instead of \$2. A copy of the opinion and order in the Tonopah Water case was sent to Mr. Beardsley, for his information, and he was advised that the \$2 rate as a minimum monthly charge was the proper rate to apply according to the decision of the Commission.

Case No. 74—Excessive Water Rates in Goldfield.

A complaint was received from C. S. Sprague of Goldfield, dated April 13, 1914, against the Goldfield Consolidated Water Company, alleging excessive rates for water service and asking for a reduction of the same. A letter was addressed to Mr. Sprague, suggesting that he file a formal complaint in the matter, but up to the time of closing this report nothing further has been heard from him.

Case No. 75—Relative to Meter and Flat Rates.

April 23, 1914. A complaint was made by Graham Sanford of Reno against the Reno Power, Light and Water Company, in which complainant made objection to the proposal of the lighting company to install a meter and bill him on the basis of meter measurement instead of the flat-rate basis. Mr. Sanford had always been billed on the flat-rate basis.

After considerable correspondence on the subject the lighting company receded from its position of requiring complainant to accept a meter rate at that time, but later on filed with the Commission a meter rate for all lighting customers of Reno and Sparks, withdrawing all flat rates. The newly filed rate became effective after thirty days' notice, and no further objection was made by complainant.

Complaint No. 76—Proposed Contract Requirements and Rules and Regulations of Nevada-California Power Company.

This case is the result of a number of complaints filed by mining companies in Tonopah and surrounding districts, against the Nevada-California Power Company, objecting to certain sections of the contract form and certain sections of the rules and regulations of the power company. The most important section objected to is section 3 of the rules and regulations which provides that all energy delivered to consumer, first, shall be measured at a single point of delivery. When current is delivered by the company at more than one point, the readings of the meters at the separate points of delivery cannot be consolidated, but the schedule will be applied to the separate reading of each meter for the purpose of billing. Second, all energy shall be measured on the primary side of customers' transformers.

After conducting a voluminous correspondence on the subject of this complaint, a hearing was had at Tonopah September 25 and 26, 1914.

At the time of closing this report the case has not been submitted for decision, as briefs have not been filed.

Case No. 77—Return of Meter Deposits.

On May 11, 1914, a communication was received from Benjamin Robinson, formerly of Tonopah, making complaint against the Nevada-California Power Company on account of the refusal of the company to refund a meter deposit of \$15. A letter was addressed to the manager of the power company, and a reply was received stating that the refund had been promptly made.

Case No. 78—Power Rates Assessed by Nevada-California Power Company.

On May 21, 1914, a complaint was filed by Wittenberg & Mushett of Manhattan, Nevada, against the Nevada-California Power Company, alleging that the company billed them for three separate installations instead of combining the readings of meters for three installations.

This case is being considered with Case No. 76.

Case No. 79—Extra Charge for Nonpayment of Bill on or Before 10th of Month.

Mr. C. Ducheneau, auditor of the Tonopah Mines Hospital Association of Tonopah, made a complaint on June 3, 1914, against the Nevada-California Power Company. The power company added 10 per cent to the bill of the hospital association for the month of April, amounting to \$1.40, because customer's check did not reach the office of the power company until the 11th of the following month. A letter was addressed to the company by Chief Commissioner Bartine, calling attention to the fact that the 10th of May fell on Sunday, a nonlegal day, and suggesting that the \$1.40 be refunded. The refund was promptly made, and the case closed.

Case No. 80—Objection to Installation of Water Meter.

On June 5, 1914, a complaint was filed by Parvin Jones of Carson City against the Carson Water Company, requesting the Commission to have water meter taken out, as he did not wish to have his water service metered. This case has been dismissed on account of the fact that the Commission has no authority to prohibit a water company from metering its service.

Case No. 81—Objection to Installation of Electric Meter.

On June 20, 1914, Rev. D. B. Murphy of Virginia City filed an informal complaint with the Commission, in which he made protest against the installation of an electric meter which the Truckee River General Electric Company purposed installing at his place. After considerable correspondence and explanation his complaint was withdrawn, and the case closed.

Case No. 82—Billing on Separate Meter Readings.

On June 24, 1914, a complaint was filed by A. I. D'Arcy, general manager of Goldfield Merger Mines Company of Goldfield, against the Nevada-California Power Company. Electric power for the mining company is metered at two points, and up to March, 1914, the readings of the two meters were combined for billing purposes. In March the rates were

applied to the separate meter readings, which resulted in an increase in the bill and was the cause of complaint.

A copy of the complaint was forwarded to the power company, and an answer received stating that, as this was a special case and the separate metering was done for a special purpose, it would recede from its position of applying the rates to the separate meter readings, and combine the readings for billing purposes.

Complainant was notified to this effect, and the case was closed.

Case No. 83—Water Rate.

On September 22, 1914, a complaint was filed by Andrew Maute against the Carson Water Company, alleging that the regular charge of \$40 per month to the United States Mint for water service was excessive, and asking that the rate be reduced.

At the suggestion of the Commission an informal conference was arranged for at the office of the Commission on September 29 at which representatives of the water company and of the Mint were present. At this conference a rate of \$30 per month for this service was decided on as satisfactory to the water company and to the complainant, and the case was closed.

Case No. 84—Water Service Requested in Tonopah.

On September 21, 1914, a complaint was made to this Commission by C. R. Douglass and other citizens of Tonopah against the Water Company of Tonopah. Complainants asked the water company to lay water mains on the streets on which they resided and connect with their service pipes. The company made no preparations to do this, therefore appeal was made to this Commission.

On September 25 a conference was held before the Commission by representatives of the complainants and of the water company, at which it was agreed that signatures would be obtained of all those who wished to have water connections made before taking further action. Under date of October 6 a list of signatures of seventeen citizens living on two adjoining streets was received asking for water connections. A letter was then directed to the water company asking the company to make the connections.

A letter was received from the company dated December 4 in which it was stated that frozen ground would make the installation of these pipe lines difficult and expensive during the winter, and asking for a delay in the matter. Accordingly at a regular meeting of the Commission it was decided to hold a hearing in the matter at an early date.

Case No. 85—Town Well Boarded Up.

On October 5, 1914, a complaint was received signed by twenty-one citizens of Luning, stating that the town well had been boarded up and taken possession of by Rockliff & Walsh, and petitioning this Commission to take action and have the well released to the citizens. Complainants were advised to take the matter up with their County Commissioners and District Attorney, as this Commission had no jurisdiction in a case of this nature.

Case No. 86—Lighting Rates at Verdi.

On October 12, 1914, a complaint was filed with this Commission by W. F. Jackman of Verdi, through his attorneys, Mack & Green, against

the Verdi Lumber Company, alleging discrimination and overcharges for electric lights.

A citation was issued to the Verdi Lumber Company under date of November 17, 1914, citing that company to file an answer to this complaint on or before December 1, 1914.

This case was heard by the Commission in Reno on January 25, 1915, and has been submitted for decision.

Case No. 87—Water Connection Requested.

On October 22, 1914, a complaint was received from M. A. Williams of Tonopah against the Water Company of Tonopah, advising that the water company refused to install a service connection to his residence. This case has been consolidated with Case No. 84, and will receive proper consideration when that case comes to a hearing.

Case No. 88—Water Connection Requested.

On September 2, 1914, a complaint was made by Henry R. Fowler of Tonopah against the Water Company of Tonopah, alleging that the water company refused to install service connections for himself and twelve other applicants. This case, also, has been consolidated with No. 84, and will be considered at the same hearing.

Case No. 89—Excessive Water Rates Alleged in Goldfield.

On December 12, 1914, a complaint was made by several citizens of Goldfield against the Goldfield Consolidated Water Company, alleging excessive and exorbitant rates for water and sewer service. Citation was issued to the water company requiring them to file answer to the complaint on or before January 9, 1915, after which date for hearing the case will be set.

Case No. 90—Insufficient Water Pressure for Fire Protection in Tonopah.

On December 12, 1914, a complaint was made by the County Commissioners of Nye County against the Water Company of Tonopah, alleging insufficient water pressure for fire protection. Citation was issued to the water company on December 17, 1914, requiring it to answer the complaint on or before January 9, 1915, after which the case will be set for hearing.

All of which is respectfully submitted.

H. F. BARTINE,
Chief Commissioner,
J. F. SHAUGHNESSY,
First Associate Commissioner,
W. H. SIMMONS,
Second Associate Commissioner.

E. H. WALKER, *Secretary.*

**ANNUAL REPORTS OF ELECTRIC, WATER, AND
GAS UTILITIES FOR THE YEAR ENDING
JUNE 30, 1914.**

WATER COMPANIES
POPULATION OF TERRITORY SERVED, AND INCOME ACCOUNT

Company	Population of territory served		Total operating revenues		Total operating expenses	
	1913	1914	1913	1914	1913	1914
Austin Water Company.....	500	450	\$3,000.25	\$2,611.30	\$2,163.90	\$1,620.97
Carson Water Company.....	2,700	2,500	16,111.50	14,698.35	4,535.28	5,733.98
City of Fallon Water System.....	1,200	1,200	6,717.51	7,122.30	2,699.43	3,185.85
Elko Water and Light Corporation.....	2,000	2,000	22,788.30	24,292.13	11,985.65	21,862.78
Ely Water Company.....	3,000	3,000	20,588.92	22,525.66	10,711.34	18,006.14
Emeralda Water and Milling Company.....	11	20	2,128.40	3,129.68	7,157.86	6,556.11
Eureka Water Works.....	5,000	400	4,279.63	3,989.90	3,261.48	2,394.90
Goldfield Consolidated Water Company.....	5,000	5,000	83,301.74	61,000.25	40,075.02	30,796.12
Hawthorne Water Works.....	200	200	2,105.30	2,159.65	1,078.52	1,076.68
Indian Springs Water Company.....	200	125	4,201.94	3,867.25	3,969.28	3,462.48
Las Vegas Land and Water Company.....	2,250	2,250	6,882.11	7,894.80	5,344.76	4,243.40
Manhattan Water Company ^a	1,000	1,000	1,976.40	1,948.42	1,687.11	1,871.85
Manhattan Water Company ^b	500	300	6,194.20	5,516.20	3,680.00	3,842.35
Mason Water, Light and Power Company.....	13,500	13,500	2,680.38	2,532.80	1,696.84	1,891.31
Reno Power, Light and Water Company.....	80	60	93,156.75	96,567.62	27,652.86	33,066.87
Ruby Hill Water Works.....	7,000	7,000	1,093.50	517.25	1,200.15	1,064.20
Tonopah Sewer and Drainage Company.....	3,143	2,974	8,978.04	13,139.72	6,076.10	7,233.47
Virginia and Gold Hill Water Company.....	500	600	94,508.45	66,672.83	67,050.49	41,732.81
Virginia Ranch Land and Cattle Company.....	5,000	5,000	2,326.00	2,255.00	1,224.00	1,775.00
Water Company of Tonopah.....	2,500	2,000	124,167.94	117,708.16	50,675.82	53,973.41
Winnemucca Water and Light Company.....	200	200	12,649.83	13,890.01	3,211.11	5,096.06
Wonder Water Company.....	200	200	4,380.10	4,058.85	6,586.48	6,484.81
Totals	50,984	49,779	\$524,167.19	\$476,437.65	\$255,627.43	\$283,004.31

^aReport of owners of the plant.

^bReport of R. H. Thomas, lessee of the plant.

WATER COMPANIES
INCOME ACCOUNT

Company	Taxes paid		Total operating expenses and taxes		Net operating revenue or deficit	
	1913	1914	1913	1914	1913	1914
Austin Water Company	\$179.90	\$173.10	\$2,333.80	\$1,694.07	\$666.45	\$917.23
Carson Water Company	1,676.16	1,892.57	6,211.44	7,626.50	9,900.06	7,071.96
City of Fallon Water System			2,699.43	3,185.85	4,018.08	8,996.46
Elko Water and Light Corporation			12,452.74	22,653.81	10,335.56	1,728.82
Ely Water Company	517.09	701.08	11,412.31	19,198.65	9,176.61	8,337.08
Emeraldia Water and Milling Company	700.97	1,183.51	7,325.86	6,729.15	5,197.46	5,699.47
Eureka Water Works	168.00	173.04	3,718.28	2,821.40	561.95	1,118.50
Goldfield Consolidated Water Company	2,502.00	2,526.76	42,577.02	33,321.88	40,724.72	27,678.37
Hawthorne Water Works	78.00	79.96	1,166.62	1,164.64	948.78	1,003.11
Indian Springs Water Company	183.11	259.56	4,172.39	5,153.52	29.55	7,236.47
Las Vegas Land and Water Company	137.55	131.56	5,452.31	5,564.08	1,896.80	2,330.72
Manhattan Water Company ^a	59.00	135.80	1,746.11	1,507.65	2,230.29	340.77
Mason Water, Light and Power Company	443.20	63.56	3,630.00	3,342.35	2,654.20	2,173.56
Reno Power, Light and Water Company	3,317.53	5,779.42	1,740.04	3,870.45	890.34	7,037.55
Ruby Hill Water Works	15.00	20.00	30,970.39	33,866.29	62,136.36	56,701.33
Tonopah Sewer and Drainage Company	504.90	1,049.82	1,215.16	1,084.20	127.65	566.46
Virginia and Gold Hill Water Company	4,391.53	4,564.55	6,531.00	3,253.39	2,397.04	4,895.33
Virginia Ranch Land and Cattle Company	53.00	53.00	61,442.42	46,587.46	83,086.03	20,085.37
Water Company of Tonopah	2,688.00	3,865.82	1,277.00	21,845.00	1,049.00	307.00
Winnemucca Water and Light Company	379.01	724.23	53,353.82	51,859.23	70,504.12	59,798.93
Wonder Water Company	106.00	233.19	5,475.07	5,367.34	7,174.76	8,382.67
Totals	\$18,159.15	\$24,397.41	\$273,686.58	\$282,809.81	\$250,480.61	\$198,627.84

^aIncludes \$1,431.48 depreciation.^bIncludes \$1,189.12 depreciation.^cReport of owners of the plant.^dReport of R. H. Thomas, lessee of the plant.*Italic figures denote deficit.*^eIncludes both water and light departments.^fIncludes \$1,615.49 depreciation.^gIncludes \$120 depreciation.^hIncludes \$1,052 depreciation.

WATER COMPANIES INCOME ACCOUNT

Company	Nonoperating revenues		Gross corporate income or loss		Interest on funded debt	
	1913	1914	1913	1914	1913	1914
Austin Water Company	\$42.40		\$668.45	\$917.23		
Carson Water Company.....		\$63.20	9,942.46	7,135.05		
City of Fallon Water System.....		439.50	4,018.08	4,376.95	\$3,680.60	\$2,100.00
Elko Water and Light Corporation.....			10,335.56	1,728.32		
Elx Water Company.....	4,049.10	2,068.75	13,216.71	5,405.78	15,800.00	15,800.00
Esmeralda Water and Milling Company.....		52.00	5,197.43	3,547.47		
Eureka Water Works.....	29.10		680.45	1,118.50		
Goldfield Consolidated Water Company.....			40,724.72	27,678.37	15,480.00	15,820.00
Hawthorne Water Works.....			948.78	1,063.11		
Indian Springs Water Company.....			29.56	1,886.57		
Las Vegas Land and Water Company.....	103.46	36.25	1,563.26	2,866.37		
Manhattan Water Company ^a			2,230.29	340.77		
Manhattan Water Company ^b			2,664.20	2,173.85		
Mason Water, Light and Power Company.....			890.34	537.63		
Reno Power, Light and Water Company.....	60.46	3,138.60	62,246.82	59,893.93	(^c)	(^c)
Ruby Hill Water Works.....			271.65	4,866.26		
Tonopah Sewer and Drainage Company.....	116.90	43.90	2,513.64	4,390.32	1,410.00	1,408.00
Virginia and Gold Hill Water Company.....			35,066.03	20,683.23		
Virginia Ranch Land and Cattle Company.....			1,063.00	80,000.00		
Water Company of Tonopah.....	228.41	501.22	7,062.53	60,000.00	41,370.00	40,080.00
Winnemucca Water and Light Company.....		270.40	7,174.76	8,663.07		901.15
Wonder Water Company.....			2,353.33	1,669.66	9.70	
Totals	\$4,620.83	\$6,363.82	\$255,101.44	\$199,991.66	\$77,250.30	\$75,107.15

^aReport of owners of the plant.^bReport of R. H. Thomas, lessee of the plant.^cSee electric report.*Italic figures denote deficit.*

**WATER COMPANIES
INCOME ACCOUNT**

Company	Other deductions from gross corporate income		Net corporate income or deficit		Dividends paid	
	1913	1914	1913	1914	1913	1914
Austin Water Company ^a	\$2,929.30		\$2,862.55	\$917.23	\$10,000.00	\$7,000.00
Carson Water Company		\$614.70	9,942.46	7,135.06		
City of Fallon Water System		\$4.27	337.48	2,261.25		
Elko Water and Light Corporation	\$4.17		10,331.39	1,724.05	9,600.00	8,900.00
Ely Water Company	\$1,158.10	\$1,206.66	\$2,411.39	11,100.83		
Emeralda Water and Milling Company			6,197.48	\$,547.47		
Eureka Water Works			690.45	1,118.50	\$590.45	\$1,118.50
Goldfield Consolidated Water Company	\$6,877.77	\$4,207.57	18,366.95	8,150.80	\$56,339.76	\$59,269.73
Hawthorne Water Works			948.78	1,003.11		
Indian Springs Water Company			29.55	1,286.37		
Las Vegas Land and Water Company			1,503.26	340.77	\$4,115.30	\$4,111.20
Manhattan Water Company			230.29			
Manhattan Water Company ^k	\$1,976.40	\$1,838.78	587.80	335.07		
Mason Water, Light and Power Company	\$284.66	\$98.13	905.68	1,135.73		
Reno Power, Light and Water Company	\$2,500.00	\$2,500.00	59,746.82	57,389.98	(6)	(6)
Ruby Hill Water Works			121.65	566.95		
Tonopah Sewer and Drainage Company			1,103.94	3,494.23		
Virginia and Gold Hill Water Company			83,066.03	20,085.37	\$2,500.00	\$2,750.00
Virginia Ranch Land and Cattle Company			1,049.00	307.00		
Water Company of Tonopah		\$87,250.00	6,670.78	17,329.85		
Winnemucca Water and Light Company	\$36,333.31	\$604.99	7,174.76	7,156.93		
Wonder Water Company			\$,535.08	1,659.65		
Totals	\$52,063.71	\$47,725.10	\$125,787.43	\$77,159.41	\$113,145.41	\$101,049.43

^aNew reservoir, \$1,383.95; new pipe lines, \$1,545.35.

^bRevenue overcharges.

^cInterest on floating debt.

^dInterest on floating debt, \$689.90; balance miscellaneous.

^eAll net earnings paid to owners of plant.

^fInterest on floating debt, \$148.83; contractual sinking fund, \$6,122.31;

miscellaneous, \$606.63.

^gInterest on floating debt, \$48.99; contractual sinking fund, \$2,716.93;

miscellaneous, \$1,446.66.

^hOnly \$9,899.96 in dividends paid out of income account.

ⁱItalic figures denote deficit.

^jNo dividends paid out of income account.

^kReport of R. H. Thomas, lessee of the plant.

^lRoyalty to owners of plant.

^mInterest on floating debt, \$50; miscellaneous, \$48.13.

ⁿWashoe Deep Well Water Company rental.

^oSee electric report.

^pContractual sinking fund requirements.

^qMiscellaneous interest.

WATER COMPANIES INCOME ACCOUNT

Company	Other deductions from net corporate income		Surplus or deficit for year		Total surplus or deficit at close of year	
	1913	1914	1913	1914	1913	1914
Austin Water Company			\$2,262.85	\$317.23	\$1,677.70	\$760.47
Carson Water Company			57.54	135.06	81.24	216.29
City of Fallon Water System			109.78	18.20	118.08	
Elko Water and Light Corporation		\$2,243.05	781.89	7,075.95		
Ely Water Company	\$227.70		\$241.39	11,100.88	30,787.22	42,200.75
Emeralda Water and Milling Company			5,197.46	3,547.47	25,317.66	23,895.09
Eureka Water Works						
Goldfield Consolidated Water Company			1,413.97	8,150.80	74,127.17	79,559.41
Hawthorne Water Works			948.78	1,008.11		
Indian Springs Water Company			29.55	1,298.27	15,806.60	16,833.31
Las Vegas Land and Water Company			1,503.26	2,386.97	8,063.62	5,683.75
Manhattan Water Company ^a			230.29	340.77		
Manhattan Water Company ^b			537.80	335.07		
Mason Water, Light and Power Company			605.68	1,125.78	623.07	507.71
Reno Power, Light and Water Company			59,746.82	57,359.93	(c)	(c)
Ruby Hill Water Works			121.65	566.95		
Tonopah Sewer and Drainage Company			1,103.94	3,045.23		
Virginia and Gold Hill Water Company		449.00	566.03	20,750.00	747.68	3,782.91
Virginia Ranch Land and Cattle Company			1,049.00	807.00		
Water Company of Tonopah			6,670.73	17,339.65	6,670.73	24,000.83
Winnemucca Water and Light Company			7,174.76	3,336.53	3,785.06	7,166.58
Wonder Water Company		3,761.10	2,532.03	1,659.66	6,978.29	8,637.94
Totals	\$227.70	\$6,453.15	\$53,089.36	\$54,452.39	\$15,968.67	\$3,083.76

^a Report of owners of the plant.^b Report of R. H. Thomas, lessee of the plant.^c See electric report.*Italic figures denote deficit.*

**WATER COMPANIES
OPERATING EXPENSES**

Company	Pumping expenses		Distribution expenses		Commercial expenses	
	1913	1914	1913	1914	1913	1914
Austin Water Company.....	\$30.00	\$30.00	\$310.60	\$232.50	\$350.00	\$300.00
Carson Water Company.....	b1,323.00	b2,125.00	702.38	921.35	555.78	
City of Fallon Water System.....	925.15	1,360.37	255.50	325.30	36.00	
Elko Water and Light Corporation.....	1,794.74	555.35	4,174.28	13,896.95		
Ely Water Company.....			3,294.09	8,506.39		
Emeralda Water and Milling Company.....			4,522.04	8,523.58		
Eureka Water Works.....			642.71	1,621.40	382.80	
Goldfield Consolidated Water Company.....	19,460.75	10,123.99	6,743.81	7,092.00	433.12	*702.39
Hawthorne Water Works.....			110.72	119.55		
Indian Springs Water Company.....	153.11	90.40	437.76	143.10		
Las Vegas Land and Water Company.....	b1,380.00	b1,880.00	787.74	1,249.10	1,150.58	1,072.43
Manhattan Water Company.....	1,632.11	23.00	1,742.48			
Manhattan Water Company ^d	2,580.00	1,910.10				
Mason Water, Light and Power Company.....	131.67	174.37				
Reno Power, Light and Water Company.....			15,851.21	21,047.65	2,000.00	2,000.00
Ruby Hill Water Works.....		81.00	82.25	23.30	9.90	
Tonopah Sewer and Drainage Company.....			448.75	1,821.23		
Virginia and Gold Hill Water Company.....			35,523.94	22,631.20	1,704.10	1,869.95
Virginia Ranch Land and Cattle Company.....	1,044.00	1,510.00		175.00		
Water Company of Tonopah.....	18,913.39	25,442.03	5,822.54	3,723.82	120.00	349.40
Winnemucca Water and Light Company.....	2,352.26	1,011.64	1,605.34	1,029.72	431.35	
Wonder Water Company.....			3,940.43	2,708.05	530.80	634.19
Totals	\$52,025.13	\$45,837.25	\$96,621.83	\$91,277.90	\$7,703.43	\$7,223.36

^aSewer expenses.

^bWater purchased.

^cReport of owners of the plant.

^dReport of R. H. Thomas, lessee of the plant.

**WATER COMPANIES
OPERATING EXPENSES**

Company	General expenses		Undistributed expenses		Total operating expenses	
	1913	1914	1913	1914	1913	1914
Austin Water Company	\$963.30	\$608.47			\$2,153.90	\$1,630.97
Carson Water Company	2,609.90	2,648.09			4,635.28	6,733.98
City of Fallon Water System	982.00	1,481.48		\$39.49	3,136.86	5,733.86
Elko Water and Light Corporation	5,980.63	7,400.48		18.70	2,699.43	21,862.73
Ely Water Company	7,824.83	9,471.96			11,985.65	18,006.14
Esmeralda Water and Milling Company	2,635.82	2,672.54	\$92.42		10,711.34	6,556.11
Eureka Water Works	2,236.47	1,202.15		27.79	7,157.86	8,361.48
Goldfield Consolidated Water Company	13,437.54	11,006.48		60.02	2,823.56	30,796.12
Hawthorne Water Works	967.80	967.04		1,986.26	40,075.02	1,076.59
Indian Springs Water Company	3,162.76	2,942.85			1,078.52	3,462.48
Las Vegas Land and Water Company	1,071.70	1,083.23	235.65		3,969.23	5,344.76
Manhattan Water Company ^a	5.00	94.75		286.13	1,687.11	4,243.40
Manhattan Water Company ^b	800.00	1,432.25			1,687.11	1,871.86
Mason Water, Light and Power Company	1,031.25	1,011.07			3,680.00	8,842.85
Reno Power, Light and Water Company	9,782.49	9,591.66	550.49	706.87	1,696.84	1,891.81
Ruby Hill Water Works	1,068.00	960.00	69.16	447.66	27,682.86	33,086.87
Tonopah Sewer and Drainage Company	5,627.35	5,912.24			1,200.15	1,064.20
Virginia and Gold Hill Water Company	12,171.80	10,490.81			6,076.10	7,233.47
Virginia Ranch Land and Cattle Company	60.00	90.00	7,860.65	6,840.85	57,060.49	41,782.81
Water Company of Tonopah	25,808.54	24,458.16			1,224.00	1,775.00
Winnemucca Water and Light Company	429.49	851.41			50,676.82	53,973.41
Wonder Water Company	2,555.05	2,722.44	178.67	184.15	6,096.06	8,211.11
				54.82	6,586.48	6,494.81
Totals	\$100,916.62	\$98,558.51	\$8,976.94	\$10,631.14	\$255,637.48	\$258,483.06

^aReport of owners of the plant.

^bReport of R. H. Thomas, lessee of the plant.

WATER COMPANIES TOTAL COST OF PLANT AND EQUIPMENT

Company	Cost at beginning of year			Additions during year			Value at close of year	
	1913	1914	1915	1913	1914	1915	1913	1914
Austin Water Company	\$29,289.40	\$32,433.70	\$3,143.30				\$32,433.70	
Carson Water Company	110,967.96	110,967.96			\$11,864.94		110,967.96	\$29,439.70
City of Fallon Water System	35,225.00	35,453.70	1,526.50		3,389.40		36,843.10	129,845.94
Elko Water and Light Corporation	137,100.00	123,540.00	12,760.00		7,140.00		134,340.00	326,445.10
Ely Water Company	721,723.43	727,341.31	5,517.98		2,396.44		737,341.31	718,343.87
Emeralda Water and Milling Company	99,997.00	99,997.00					99,997.00	99,997.00
Eureka Water Works	73,439.73	73,406.60	6,249.73		3,821.40		80,000.00	81,325.00
Goldfield Consolidated Water Company	1,235,172.53	1,301,492.45	6,319.03		1,934.77		1,301,492.45	1,301,492.45
Hawthorne Water Works	19,630.86	19,630.86					19,630.86	19,630.86
Indian Springs Water Company	199,693.31	199,614.19		30.98	33.41		199,614.19	199,614.19
Las Vegas Land and Water Company	16,023.07	18,112.08		2,088.96			18,112.08	18,144.44
Manhattan Water Company ^a	6,103.00	6,785.11	1,682.11		1,349.10		6,785.11	6,785.11
Manhattan Water Company ^b								
Mason Water, Light and Power Company	14,108.71	14,453.25	344.54				14,453.25	14,453.25
Reno Power, Light and Water Company	20,899.11	23,682.98	2,693.87		18,314.08		23,682.98	23,682.98
Ruby Hill Water Works	70,014.30	73,563.80	3,548.50		4,529.16		73,563.80	73,563.80
Tonopah Sewer and Drainage Company								
Virginia and Gold Hill Water Company ^c	10,000.00	10,000.00					10,000.00	10,000.00
Virginia Ranch Land and Cattle Company	1,681,848.27	1,688,183.30			16,031.38		1,688,183.30	1,688,183.30
Water Company of Tonopah	51,542.76	53,386.63	1,843.87		3,761.10		53,386.63	57,147.73
Winnemucca Water and Light Company	745,146.50	745,146.50					745,146.50	745,146.50
Wonder Water Company								
Totals	\$5,236,915.08	\$5,342,088.37	\$17,374.44		\$48,119.04		\$5,390,207.47	\$5,390,207.47

^aReport of owners of the plant.

^bReport of R. H. Thomas, lessee of the plant.

^cNo report of cost of plant and equipment of the Virginia and Gold Hill Water Company, account records lost in San Francisco fire.
Italic figures denote reduction.

WATER COMPANIES
CAPITAL STOCK, AND FUNDED DEBT OUTSTANDING

Company	Total par value of capital stock outstanding		Total par value of all debt outstanding		Total par value of capital stock and debt outstanding	
	1913	1914	1913	1914	1913	1914
Austin Water Company	\$25,000.00	\$25,000.00			\$25,000.00	\$25,000.00
Carson Water Company	100,000.00	100,000.00			100,000.00	112,500.00
City of Fallon Water System			\$35,000.00	\$12,500.00		35,000.00
Elko Water Company	150,000.00	150,000.00			150,000.00	150,000.00
Ely Water Company	500,000.00	500,000.00			500,000.00	755,000.00
Emeralda Water and Milling Company	100,000.00	100,000.00	255,000.00	255,000.00	100,000.00	100,000.00
Eureka Water Works						
Goldfield Consolidated Water Company	988,996.00	988,996.00	258,000.00	254,000.00	1,246,996.00	1,242,996.00
Hawthorne Water Works						
Indian Springs Water Company	200,000.00	200,000.00			200,000.00	200,000.00
Las Vegas Land and Water Company	50,000.00	50,000.00			50,000.00	50,000.00
Manhattan Water Company ^a						
Manhattan Water Company ^b						
Mason Water, Light and Power Company						
Reno Power, Light and Water Company	18,560.00	9,697.50			18,560.00	9,697.50
Ruby Hill Water Works	(c)	(c)	(c)	(c)		(c)
Tonopah Sewer and Drainage Company	200,000.00	200,000.00	23,500.00	23,000.00	223,500.00	223,000.00
Virginia and Gold Hill Water Company	5,000,000.00	5,000,000.00			5,000,000.00	5,000,000.00
Virginia Ranch Land and Cattle Company						
Water Company of Tonopah	1,000,000.00	1,000,000.00	729,000.00	707,000.00	1,729,000.00	1,707,000.00
Winnemucca Water and Light Company	100,000.00	100,000.00	80,000.00	80,000.00	180,000.00	180,000.00
Wonder Water Company	974,960.00	974,960.00			974,960.00	974,960.00
Totals	\$9,407,506.00	\$9,398,643.50	\$1,380,500.00	\$1,316,500.00	\$10,788,006.00	\$10,715,143.50

^aReport of owners of the plant.^bReport of R. H. Thomas, lessee of the plant.^cSee electric report.

WATER COMPANIES
NUMBER AND CLASSIFICATION OF CONSUMERS

Company	Commercial		Industrial		Public		Total consumers		Increase over preceding year		Decrease under preceding year	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
Austin Water Company.....	123	118	8	8	3	3	129	134	---	---	4	5
Carson Water Company.....	424	431	18	31	53	54	505	515	---	---	9	---
City of Fallon Water System.....	156	183	---	9	3	3	159	195	84	11	---	---
Elko Water and Light Corporation.....	373	384	69	69	12	11	455	474	84	37	---	---
Ely Water Company.....	448	512	8	8	24	24	480	544	84	19	---	---
Everetts Water Works.....	6	7	1	2	---	---	6	9	82	64	---	---
Europe Water Works.....	46	51	2	---	21	21	69	72	---	---	10	---
Goldfield Consolidated Water Company.....	418	423	40	36	55	58	513	517	---	---	3	---
Hawthorne Water Works.....	50	53	2	0	9	10	61	65	---	---	4	---
Indian Springs Water Company.....	47	41	0	0	6	6	53	47	---	---	11	---
Las Vegas Land and Water Company.....	332	334	4	4	4	7	340	345	26	5	---	---
Manhattan Water Company ^a	191	145	0	3	8	0	199	148	---	---	---	---
Mason Water Light and Power Company.....	80	80	1	1	19	19	82	110	10	7	---	---
Reno Power, Light and Water Company.....	2,943	2,951	46	47	26	26	3,015	3,064	225	49	---	---
Ruby Hill Water Works.....	15	14	4	4	1	1	20	17	---	---	2	---
Tonopah Sewer and Drainage Company.....	165	169	11	8	7	8	183	185	11	2	---	---
Virginia and Gold Hill Water Company.....	676	626	40	43	6	6	722	675	---	---	130	---
Virginia Ranch Land and Cattle Company.....	44	43	10	20	3	3	57	65	8	8	---	---
Water Company of Tonopah.....	651	796	8	20	36	41	664	846	---	---	---	---
Winnemucca Water and Light Company.....	344	373	29	35	9	9	390	426	---	---	---	---
Wonder Water Company.....	24	34	0	0	17	18	27	34	---	---	---	---
Totals	7,557	7,828	296	332	298	319	8,139	8,479	545	462	236	112

^aReport of owners of the plant.^bReport of R. H. Thomas, lessee of the plant.

ELECTRIC AND GAS UTILITIES
POPULATION OF TERRITORY SERVED, AND INCOME ACCOUNT

Company	Population of territory served		Total operating revenues		Total operating expenses	
	1918	1914	1913	1914	1913	1914
City of Fallon Electric System	1,000		\$10,779.67		\$5,983.54	\$7,159.64
Consolidated Power and Telephone Company	1,500	1,800	*16,036.10		*11,306.41	9,762.70
Douglas Milling and Power Company	2,000	2,000	6,800.00		b1,375.00	1,178.50
Elko-Lamolle Power Company ^c	2,000	2,500	31,102.97		20,433.90	13,529.46
Ely Light and Power Company	3,300	3,300	42,737.39		32,432.14	35,130.47
Las Vegas Land and Water Company	250	300	2,897.65		8,069.68	4,296.41
Lovelock and Woolsey Light and Power Company ^d	1,200	1,200	5,893.90		5,730.00	7,679.55
Mason Water, Light and Power Company	500	300	4,809.73		3,231.83	3,610.12
The Nevada-California Power Company	9,600	14,375	947,095.98		262,896.34	339,115.30
Pacific Power Company	1,200	1,500	66,823.87		25,969.78	31,881.27
Reno Power, Light and Water Company	3,000	3,000	182,018.77		73,442.27	71,234.40
Southern Pacific Company (Carlin Plant)			1,467.85		1,199.70	15,969.17
Stephens Valley Smelting and Mining Company			15,089.30		14,256.02	92,543.39
The Truckee River General Electric Company	9,000	9,000	381,219.77		91,447.96	2,292.21
Verdi Lumber Company					2,545.98	
Winnemucca Water and Light Company	2,500	2,000	23,212.68		13,621.38	12,476.07
Carson City Coal Gas Company	2,466	2,466	5,293.21		4,348.71	4,331.96
Nevada Gas Company			11,385.37		16,019.33	20,373.09
Reno Power, Light and Water Company	13,500	13,500	43,042.45		23,861.43	29,342.64
Totals	66,516	71,941	\$1,741,266.71	\$1,623,210.96	\$615,575.37	\$706,542.72

*Includes \$2,277.04 earnings from telephone department, and operating expenses include \$1,182.13, chargeable to telephone department.

^bFor period February 1, 1913, to June 30, 1913, inclusive.

^cFormerly operated under the name of Elko Water and Light Corporation.

^dFormerly operated under name of S. R. Young Electric Plant.

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Taxes		Total operating expenses and taxes		Net operating revenue or deficit	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System.....						\$3,331.22
Consolidated Power and Telephone Company.....	\$144.00	\$155.52	\$5,853.54	\$7,159.64	\$4,846.13	3,000.00
Douglas Milling and Power Company.....	774.10	164.40	11,450.41	*12,861.29	b ₄ 585.69	738.50
Elko-Lamolle Power Company ^a	341.00	545.60	c ₁ 1,449.10	d ₁ 1,718.50	e ₁ 1,069.10	15,921.10
Ely Light and Power Company.....	1,567.14	1,606.87	20,774.80	14,075.06	10,828.17	1,563.22
Las Vegas Land and Water Company.....		20.80	84,148.28	40,468.80	8,638.11	1,530.32
Lovelock and Woolsey Light and Power Company ^f			3,099.68	4,807.21	202.03	2,063.85
Mason Water, Light and Power Company.....	43.20	63.66	5,790.00	h ₈ 221.05	1,534.70	1,272.78
The Nevada-California Power Company.....	16,500.00	18,435.00	3,275.08	13,986.39	1,634.70	485,376.23
Pacific Power Company.....	1,609.65	2,842.63	279,886.34	150,756.80	667,709.64	54,854.42
Reno Power, Light and Water Company.....	6,635.05	11,816.60	27,699.43	37,924.00	39,224.45	94,824.77
Southern Pacific Company (Carlin Plant).....			80,077.32	83,187.87	263.15	632.40
Steptoe Valley Smelting and Mining Company.....	595.72	600.00	1,199.70	1,224.40	187.56	1,017.48
The Truckee River General Electric Company.....	15,102.73	18,887.32	14,851.74	16,599.17	111,835.71	222,946.22
Verdi Lumber Company.....			106,550.69	2,232.21	224,690.06	553.77
Winnemucca Water and Light Company.....	758.02	734.23		17,790.30	8,993.28	4,990.11
Carson City Coal Gas Company.....	406.00	448.00	4,754.71	4,829.96	538.60	906.99
Nevada Gas Company.....	857.62	856.19	16,406.95	20,729.28	5,081.58	5,337.03
Reno Power, Light and Water Company.....	1,105.84	2,713.98	29,967.37	32,066.62	13,076.18	12,136.24
Totals	\$45,860.07	\$69,580.80	\$660,935.44	\$928,227.76	\$1,060,331.27	\$399,968.10

^aFormerly operated under the name of the S. R. Young Electric Plant.

^bIncludes \$541.50 depreciation.

^cIncludes \$292.61 depreciation.

^dIncludes \$150,000 depreciation.

^eIncludes \$4,500 depreciation.

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ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Nonoperating revenues		Gross corporate income or deficit		Interest on funded debt	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System.....	\$124.53	\$96.67	\$4,846.13	\$3,397.89	\$1,131.30	\$900.00
Consolidated Power and Telephone Company.....			54,710.22	3,000.00		
Douglas Milling and Power Company.....			57,089.10	738.50		
Elko-Lamoille Power Company.....			10,328.17	15,921.10		
Ely Light and Power Company.....	224.24	106.00	8,862.35	1,457.22		
Las Vegas Land and Water Company.....			202.03	1,530.32		
Lovelock and Woolsey Light and Power Company ^d			163.90	2,063.55		
Mason Water, Light and Power Company.....			1,534.70	1,429.67		
The Nevada-California Power Company.....			733,434.68	574,210.63		
Pacific Power Company.....	65,725.04	88,832.60	39,474.78	64,923.18		
Reno Power, Light and Water Company.....	250.34	68.76	182,702.81	170,684.60		
Southern Pacific Company (Carlin Plant) ^e	980,760.86	475,869.88	286.15	622.40		
Steptoe Valley Smelting and Mining Company.....	110.82	111.00	298.38	1,128.43		
The Truckee River General Electric Company.....	236.91	\$656.85	\$225,815.81	223,606.07		
Verdi Lumber Company.....				533.77		
Winnemucca Water and Light Company.....	35.00	72.40	8,968.28	4,992.51	1,802.30	901.15
Carson City Coal Gas Company.....			538.50	906.99		
Nevada Gas Company.....			6,027.53	2,337.03		
Reno Power, Light and Water Company.....	211.64	1,086.88	13,286.82	13,230.12	6,206.68	6,020.04
Totals	\$147,679.38	\$166,765.88	\$1,223,920.47	\$1,066,738.96	\$239,250.78	\$283,097.81

^aIncludes net earnings of telephone department.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cFormerly operated under name Elko Water and Light Corporation.^dFormerly operated under name of S. R. Young Electric Plant.^eRepresents \$7,727.22 nonoperating revenues, and \$73,033.54 net earnings of water and gas departments.^fRepresents \$5,239.78 nonoperating revenues, and \$70,620.06 net earnings of water and gas departments.^gRepresents \$242.43 nonoperating revenues, and \$414.42 net earnings of water department in California.^h\$909.82 added on account of earnings in operation of water company in California.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Other deductions from gross corporate income		Net corporate income or deficit		Dividends declared	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$1,770.00	\$3,000.00	\$3,714.83	\$2,497.89		
Consolidated Power and Telephone Company			2,940.22			
Douglas Milling and Power Company			7,089.10	753.50		
Elko-Lamolle Power Company ^a	\$320.00	\$5,827.62	10,008.17	10,898.48	\$4,800.00	
Ely Light and Power Company	15,461.23	\$473.17	3,401.12	984.05		
Las Vegas Land and Water Company			\$208.08	1,530.32		
Lovelock and Woolsey Light and Power Company ^b			163.90	2,063.85		
Mason Nevada Light and Power Company			1,250.04	1,261.77		
The Nevada-California Power Company	\$284.66	\$167.90	331,711.12	306,876.36	182,660.00	\$199,580.00
Pacific Power Company	\$284,613.06	\$105,067.35	8,678.08	14,571.47		
Reno Power, Light and Water Company	\$162.80	\$21,494.65	114,704.62	102,812.19		
Southern Pacific Company (Carlin Plant)	\$22,997.69	\$22,872.41	288.15	638.40		
Stephens Valley Smelting and Mining Company			298.38	1,128.43		
The Truckee River General Electric Company			136,345.02	42,509.45	112,500.00	120,000.00
Ventil Lumber Company	\$89,470.79	\$181,095.62		558.77		
Winnemucca Water and Light Company	\$1,203.73	\$605.00	5,962.25	8,486.36		
Carson City Coal Gas Company	\$976.15	\$963.58	437.65	56.59		
Nevada Gas Company	\$10,025.40	\$6,920.55	\$1,253.66	16,571.62		
Reno Power, Light and Water Company			(^c)	(^c)		
Totals	\$367,276.51	\$948,178.35	\$578,107.86	\$442,232.70	\$344,960.00	\$409,580.00

^aInterest on floating debt.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cFormerly operated under name Elko Water and Light Corporation.^dInterest on real estate mortgages.^eInterest on floating debt, \$1,372.20; miscellaneous deductions, \$284.38.^fFormerly operated under the name of the S. R. Young Electric Plant.^gInterest on floating debt, \$50; uncollectible accounts, \$117.90.^hDepreciation of plant and equipment, \$123,856.16; interest on floating debt, \$27,029.78; contractual sinking fund, \$81,841.32; miscellaneous, \$2,886.85.ⁱInterest on floating debt, \$31,671.89; contractual sinking fund, \$78,196.16; uncollectible accounts, \$189.80.^jInterest on deposits.^kInterest on floating debt, \$276.75; interest on floating debt, \$21,218.90.^lInterest on floating debt, \$1,272.69; contractual sinking fund, \$9,225; Washoe County rentals, \$12,500.^mInterest on floating debt, \$472.41; contractual sinking fund, \$9,900; Washoe County rentals, \$12,500.ⁿInterest on floating debt, \$87,263.01; uncollectible accounts, \$92,853.26; miscellaneous, \$979.35.^oInterest.^pDepreciation, \$3,600; miscellaneous, \$6,425.40.^qDepreciation, \$3,600; miscellaneous, \$3,320.55.^rSee electric report.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
INCOME ACCOUNT

Company	Other deductions from net corporate income		Surplus or deficit for year		Total surplus or deficit at close of year	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System.....		\$2,717.17	\$3,714.88	\$219.23	\$3,606.88	\$756.00
Consolidated Power and Telephone Company.....			2,940.22		2,940.22	556.40
Douglas Milling and Power Company.....			51,089.10	733.50	51,089.10	10,279.20
Elko-Lamoille Power Company.....			5,208.17	10,393.43		40,518.59
Ely Light and Power Company.....			3,401.12	984.05	39,534.54	1,543.91
Las Vegas Land and Water Company.....			202.03	1,550.32	202.03	
Lovelock and Woolsey Light and Power Company ^d			163.90	2,063.86	141.05	
Mason Water, Light and Power Company.....			1,250.04	1,261.77	1,487.09	2,748.86
The Nevada-California Power Company.....			149,051.12	107,296.36	1,156,598.51	1,245,483.71
Pacific Power Company.....			8,673.02	14,571.47	52,751.63	91,565.91
Reno Power, Light and Water Company.....	\$4,559.00	\$6,362.50	66,145.62	6,449.69	459,555.74	496,490.17
Southern Pacific Company (Carlin Plant).....			288.15	632.40		
Stephens Valley Smelting and Mining Company.....			298.38	1,128.43		
The Truckee River General Electric Company.....			23,845.02	77,490.55		
Ventri Lumber Company.....				553.77		
Winnemucca Water and Light Company.....		\$962.54	5,962.25	2,523.82	542,061.75	496,136.41
Carson City Coal Gas Company.....					3,609.42	6,370.85
Nevada Gas Company.....			437.65	56.59	533.20	551.79
Reno Power, Light and Water Company.....			21,253.66	16,271.63	66,313.73	82,812.35
Totals	\$4,559.00	\$10,042.21	\$229,588.36	\$22,610.49	\$2,081,531.67	\$2,049,242.73

^aAppropriations to construction.^bFor period February 1, 1913, to June 30, 1913, inclusive.^cFormerly operated under the name of Elko Water and Light Corporation.^dFormerly operated under name of S. R. Young Electric Plant.^eReplacement reserve.*Italic figures denote deficit.*

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Power expense		Transmission and trans- formation expenses ^a		Distribution expense	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$4,175.48	\$4,566.98			\$66.50	\$437.50
Consolidated Power and Telephone Company	6,844.68	7,438.44				518.05
Douglas Milling and Power Company	492.50	1,010.00		\$55.00		40.00
Elko-Lamoille Power Company ^d	11,906.01	9,185.51		180.52		2,820.03
Ely Light and Power Company	20,670.71	20,383.87			2,925.68	3,034.79
Las Vegas Land and Water Company	3,067.30	3,997.70			12.38	64.60
Lovelock and Woolsey Light and Power Company ^e	630.00	315.00	\$300.00			
Mason Water, Light and Power Company	1,868.00	2,062.60				841.56
The Nevada-California Power Company	137,256.51	188,009.24	29,490.90	34,356.12	18,268.77	20,823.67
Pacific Power Company	14,257.60	19,659.18	7,091.56	9,910.69	1,298.31	1,299.10
Reno Power, Light and Water Company	32,159.78	27,625.71	2,879.01	8,074.32	10,320.69	8,156.52
Southern Pacific Company (Carlin Plant)	1,199.70	1,224.40				
Stephens Valley Smelting and Mining Company	4,623.28	7,602.92				
The Truckee River General Electric Company	36,180.33	28,581.85	11,012.12	13,609.51	5,782.87	5,189.87
Verdi Lumber Company		1,600.00			9,866.96	6,603.89
Winnemucca Water and Light Company	9,625.26	10,568.37			1,216.35	409.66
Carson City Coal Gas Company			3,068.15	2,808.44		466.96
Nevada Gas Company			10,208.70	13,040.71	304.71	5,808.27
Reno Power, Light and Water Company			16,231.44	14,987.45	6,782.22	5,662.13
Totals	\$284,877.09	\$333,721.77	\$79,281.88	\$91,987.86	\$60,781.26	\$61,875.70

^aProduction expenses shown in this column for gas companies.^bGas companies; same item of expense as for electric companies.^cFor period February 1, 1913, to June 30, 1913, inclusive.^dFormerly operated under the name of Elko Water and Light Corporation.^eFormerly operated under the name of S. R. Young Electric Plant.

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Consumption expenses ^a		Commercial expense		General expense	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$196.89	\$549.32			\$1,550.23	\$1,592.94
Consolidated Power and Telephone Company					4,451.73	4,451.73
Douglas Milling and Power Company			5,822.50		5,822.50	5,822.50
Elko Gas Milling and Power Company	1,128.63		2,267.88	\$650.00	5,121.92	610.96
Ely Light and Power Company	348.80	290.45			10,944.99	10,944.99
Las Vegas Light and Power Company		42.12			8,199.56	8,199.56
Los Angeles and Portland Company				121.92		60.00
Los Angeles and Woodland Light and Power Company ^d				118.22	4,802.10	4,200.00
Mason Water, Light and Power Company	613.39		734.20	516.29	4,698.36	4,698.36
The Nevada-California Power Company	1,380.98	2,526.45	11,821.69	16,766.40	67,967.81	66,168.82
Pacific Power Company					8,851.31	8,851.31
Reno Power, Light and Water Company	2,460.90	2,008.82	2,370.60	8,526.75	21,810.43	19,186.90
Southern Pacific Company (Cardin Plant)						
Stentoe Valley Smelting and Mining Company						
The Truckee River General Electric Company	1,973.27	1,515.22	3,775.24	6,169.23	3,949.37	3,949.37
Verdi Lumber Company					26,941.44	27,820.06
Winnemucca Water and Light Company	548.10	188.86	622.06	646.64	501.66	538.34
Carson City Coal Gas Company						
Nevada Gas Company						
Reno Power, Light and Water Company	674.31	106.01	54.22	82.98	751.79	800.81
			2,470.06	3,805.04	1,057.23	1,215.15
Totals	\$9,465.27	\$7,179.25	\$23,338.36	\$36,899.83	\$146,016.42	\$147,602.44

^aExpenses from municipal contract lighting, gas companies, are shown in this column.^bFor period from February 1, 1913, to June 30, 1913, inclusive.^cFormerly operated under the name of Elko Water and Light Corporation.^dFormerly operated under name of S. R. Young Electric Plant.^eLabor expenses.^fInsurance.

ELECTRIC AND GAS UTILITIES
OPERATING EXPENSES

Company	Undistributed expenses		Total operating expenses		Ratio of operating expenses to earnings—Per cent	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$4.39	\$12.90	\$5,993.54	\$7,159.54	55.04	68.25
Consolidated Power and Telephone Company	---	---	11,398.41	9,752.70	79.50	61.49
Douglas Millin and Power Company	---	---	41,375.00	1,178.10	381.94	45.46
Elko Light and Power Company ^b	---	---	20,483.84	13,159.46	61.70	45.10
Ely Light and Power Company	---	---	20,483.84	36,139.47	76.94	93.46
Las Vegas Land and Water Company	\$74.39	\$76.97	8,089.53	4,236.41	108.97	154.86
Lovelock and Woolsey Light and Power Company ^c	---	---	5,730.00	3,679.55	97.22	74.67
Mason Water, Light and Power Company	---	---	3,231.88	3,610.12	67.19	69.80
The Nevada-California Power Company	---	---	292,886.34	339,115.30	27.16	34.15
Pacific Power Company	---	---	25,989.78	85,081.37	38.89	37.81
Reno Power, Light and Water Company	1,440.86	2,803.25	73,442.27	71,931.27	40.10	37.41
Southern Pacific Company (Carlin Plant)	---	---	1,198.70	1,224.40	81.73	208.94
Stearns Valley Smelting and Mining Company	---	---	14,266.02	15,999.17	94.79	90.82
The Truckee River General Electric Company	1,696.58	8,748.48	91,447.96	92,548.39	27.61	27.68
Verdi Lumber Company	---	---	---	2,292.31	---	80.54
Winnemucca Water and Light Company	1,107.94	184.20	13,521.88	12,476.07	58.25	55.15
Carson City Coal Gas Company	169.84	227.77	4,848.71	4,881.96	82.16	76.38
Nevada Gas Company	129.29	200.95	16,019.33	20,873.09	140.70	117.10
Reno Power, Light and Water Company	212.02	592.71	28,861.43	29,842.64	67.05	66.81
Totals	\$11,851.09	\$27,296.87	\$615,575.37	\$706,542.72	35.35	40.58

^aFor period February 1, 1913, to June 30, 1913, inclusive.^bFormerly operated under the name of the Elko Water and Light Corporation.^cFormerly operated under the name of the S. R. Young Electric Plant.

ELECTRIC AND GAS UTILITIES
TOTAL COST OF PLANT AND EQUIPMENT

Company	Cost at beginning of year		Additions during year		Cost at close of year	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$15,000.00	\$17,606.75	\$2,606.75	\$2,717.17	\$17,606.75	\$20,323.92
Consolidated Power and Telephone Company	20,419.63	22,326.38	1,906.75	176.60	22,326.38	22,149.78
Douglas Milling and Power Company	45,715.00	16,960.94		43.75	16,960.94	17,004.69
Elko-Lamoille Power Company ^a	244,710.85	75,000.00	385.00	66,603.63	46,100.00	141,603.63
Ely Light and Power Company	63.95	242,020.43	2,690.42	7,415.86	242,020.43	249,436.29
Las Vegas Land and Water Company	42,703.67	1,972.05	1,908.09	175.96	1,972.04	2,148.01
Lovelock and Woolsey Light and Power Company ^b	3,477.60	48,634.67	4,931.00	8,046.30	47,634.67	51,680.97
Mason Water, Light and Power Company	8,478,448.38	4,072.21	594.61	172.21	4,072.21	3,900.00
The Nevada-California Power Company	1,841,554.15	8,403,200.29	75,243.09	155,301.51	8,403,200.29	8,558,501.80
Pacific Power Company	2,023,479.64	1,968,148.16	126,594.01	37,746.90	1,968,148.16	1,990,401.26
Reno Power, Light and Water Company		1,976,381.13	48,098.51	145.75	1,976,381.13	1,976,236.38
Southern Pacific Company (Carlin Plant)						
Steptoe Valley Smelting and Mining Company	10,465,571.33	10,550,762.68	96,181.35	81,298.56	10,550,762.68	10,632,039.24
The Truckee River General Electric Company	92,246.60	101,414.93	9,168.83	962.54	101,414.93	102,377.47
Verdi Lumber Company	58,648.23	59,202.83	554.60	1,231.86	59,202.83	60,494.69
Winnemucca Water and Light Company	262,893.61	254,667.29	2,992.28	9,916.11	254,667.29	264,583.40
Carson City Coal Gas Company	11,004.89	13,076.02	2,071.13	3,327.47	13,076.02	16,408.49
Nevada Gas Company						
Reno Power, Light and Water Company						
Totals	\$23,536,437.53	\$23,754,436.76	\$122,856.88	\$293,847.26	\$23,725,256.36	\$24,048,284.02

^aFormerly operated under the name of the Elko Water and Light Corporation.^bFormerly operated under the name of the S. R. Young Electric Plant.*Italic figures denote reduction.*

ELECTRIC AND GAS UTILITIES
CAPITAL STOCK, AND FUNDED DEBT OUTSTANDING

Company	Total par value of capital stock outstanding		Total par value of all debt outstanding		Total par value of capital stock and debt outstanding	
	1913	1914	1913	1914	1913	1914
City of Fallon Electric System	\$100,000.00	\$100,000.00	\$15,000.00	\$15,000.00	\$15,000.00	\$15,000.00
Consolidated Power and Telephone Company	27,500.00	27,500.00	50,000.00	50,000.00	150,000.00	150,000.00
Douglas Milling and Power Company	150,000.00	60,000.00			27,500.00	27,500.00
Elko-Lamoille Power Company ^a	200,000.00	200,000.00		76,312.50	150,000.00	186,312.50
Ely Light and Power Company	50,000.00	50,000.00			200,000.00	200,000.00
Las Vegas Land and Water Company ^b					50,000.00	50,000.00
Lovelock and Woolsey Light and Power Company ^c	18,560.00	9,897.50				
Mason Water, Light and Power Company ^d	5,000,000.00	5,000,000.00	2,734,000.00	2,663,000.00	18,560.00	9,897.50
The Nevada-California Power Company	800,000.00	800,000.00	800,000.00	800,000.00	7,734,000.00	7,663,000.00
Pacific Power Company	1,000,000.00	1,000,000.00	750,000.00	750,000.00	1,600,000.00	1,600,000.00
Reno Power, Light and Water Company					1,750,000.00	1,750,000.00
Southern Pacific Company (Carlin Plant)						
Stephens Valley Smelting and Mining Company						
The Truckee River General Electric Company						
Verdi Lumber Company	3,000,000.00	3,000,000.00				
Winnemucca Water and Light Company ^b						
	100,000.00	100,000.00	30,000.00	30,000.00	3,000,000.00	3,000,000.00
Carson City Coal Gas Company	50,000.00	50,000.00				
Nevada Gas Company	150,000.00	150,000.00	86,000.00	86,000.00	130,000.00	130,000.00
Reno Power, Light and Water Company ^d					50,000.00	50,000.00
					286,000.00	286,000.00
Totals	\$10,646,098.00	\$10,547,290.50	\$4,465,000.00	\$4,470,312.50	\$15,111,098.00	\$15,017,603.00

^aFormerly operated by the Elko Water and Light Corporation.

^bIncludes capital account of both water and light departments.

^cFormerly operated under the name of the S. R. Young Electric Plant.

^dSee electric report of this company.

ELECTRIC AND GAS UTILITIES
COMMERCIAL CONSUMERS, AND POWER GENERATED

Company	Total number of lighting consumers		Total number of power consumers		Total number of consumers		Number of consumers on meter basis		Total number of KWH generated by all methods ^a	
	1913	1914	1913	1914	1913	1914	1913	1914	1913	1914
City of Fallon Electric System.....	282	299	8	61	290	359	290	311	b111,113	b156,788
Consolidated Power and Telephone Company.....	183	196	0	0	183	196	101	100	---	107,622
Douglas Milling and Power Company ^c	59	63	21	6	80	74	80	74	---	---
Elko-Lamoille Power Company ^d	352	490	5	22	357	512	0	0	---	---
Ely Light and Power Company ^e	661	661	26	26	687	687	684	684	270,403	---
Las Vegas Land and Water Company.....	66	66	1	1	66	66	2	1	376,048	389,685
Lovelock and Woolsey Light and Power Co. ^f	96	182	0	0	96	182	2	72	---	39,977
Mason Water, Light and Power Company.....	150	83	6	9	156	47	35	47	84,160	598,720
The Nevada-California Power Company.....	2,470	3,062	80	111	2,550	3,173	2,550	3,153	58,316,288	79,073,990
Pacific Power Company.....	82	110	4	7	86	117	9	25	6,962,704	6,761,100
Reno Power, Light and Water Company.....	---	---	---	---	2,962	3,084	2,565	2,742	10,069,200	11,960,000
Southern Pacific Company (Carlin Plant).....	---	---	---	---	---	---	---	---	---	---
Steptoe Valley Smelting and Mining Company.....	438	438	0	0	438	438	0	0	389,607	653,464
The Truckee River General Electric Company.....	---	---	---	---	1,611	1,628	1,218	1,549	32,162,870	29,867,000
Verdi Lumber Company.....	---	---	---	---	---	---	---	---	---	---
Winnemucca Water and Light Company.....	312	333	1	2	313	335	313	335	846,220	239,610
Carson City Coal Gas Company.....	---	---	---	---	---	---	---	---	---	---
Nevada Gas Company.....	---	---	---	---	214	225	214	225	2,727,700	2,986,100
Reno Power, Light and Water Company.....	---	---	---	---	362	517	362	517	8,843,700	12,679,300
Totals.....	5,122	5,944	152	246	11,946	13,096	10,346	11,338	31,069,900	32,961,700
									{ \$108,065,563	\$129,837,906
									{ 442,631,300	443,547,100

^aFigures for gas companies shown in this column are the number of cubic feet of gas produced.

^bPower purchased.

^cFigures shown for 1913 are for the period February 1, 1913, to June 30, 1913, inclusive.

^dFormerly operated under the name of the Elko Water and Light Corporation.

^e1914 figures not reported. 1913 figures shown in this report.

^fFormerly operated under the name of the S. R. Young Electric Plant.

^gElectric KWH.

^hCubic feet of gas.

DIRECTORS AND OFFICERS OF WATER, GAS, AND ELECTRIC UTILITIES

WATER COMPANIES

Austin Water Company

Directors—Emma M. Farnsworth, Louis H. Farnsworth, Louis D. Farnsworth, Herbert M. Chamberlain, T. Ellis Browne, all of Salt Lake City, Utah.

Officers—President, Emma M. Farnsworth; Vice-President, Louis H. Farnsworth; Secretary, Louis D. Farnsworth; Treasurer, Louis D. Farnsworth, all of Salt Lake City, Utah.

Carson Water Company

Directors—Clara V. Yerington, San Francisco, Cal.; H. H. Yerington, San Francisco, Cal.; E. B. Yerington, Carson City, Nevada.

Officers—President, Clara V. Yerington, San Francisco, Cal.; Vice-President, H. H. Yerington, San Francisco, Cal.; Secretary and Treasurer, E. B. Yerington, Carson City, Nevada; Superintendent, F. A. Cushing, Carson City, Nevada.

City of Fallon Water System

Directors—Geo. E. Sherman, John Oats, J. C. Jones, Joe Jarvis, L. W. Crehore, W. H. Reavis, City Officials, Fallon, Nevada.

Officers—Mayor, Geo. E. Sherman; Secretary, W. H. Reavis; Treasurer, John P. Schnider; City Engineer and Superintendent, L. W. Crehore.

Elko Water and Light Corporation

Directors—Chas. B. Henderson, Ethel S. Henderson, John Henderson, W. T. Smith, all of Elko, Nevada.

Officers—President, W. T. Smith; Vice-President and Secretary, Chas. B. Henderson; Treasurer, John Henderson.

Ely Water Company

Directors—Frank W. Holmes, Mt. Vernon, N. Y.; H. A. Gray, New York, N. Y.; H. E. Dodge, Henry F. J. Knobloch, Bayonne, N. J.; David E. Thomas, Bayonne, N. J.

Officers—President, Frank W. Holmes, Mt. Vernon, N. Y.; Vice-President, H. A. Gray, New York, N. Y.; Secretary, Henry F. J. Knobloch, Bayonne, N. J.; Treasurer, H. E. Dodge.

The Esmeralda Water and Milling Company

Directors—Frederic L. Sherwin, Warren F. Sears, Daniel W. Knowlton, all of Colorado Springs, Colo.

Officers—President, Frederic L. Sherwin; Vice-President, Warren F. Sears; Secretary, Daniel W. Knowlton; Treasurer, Warren F. Sears, all of Colorado Springs, Colo.

Eureka Water Works

Directors—None. Private property. Sole ownership.

Superintendent, M. M. Fletcher, Eureka, Nevada.

The Goldfield Consolidated Water Company

Directors—T. B. Rickey, Berkeley, Cal.; L. B. Curtis, Denver, Colo.; F. M. Ish, Oakland, Cal.; Milo A. Smith, Denver, Colo.; Chas. G. Patrick, Goldfield, Nevada.

Officers—President, T. B. Rickey, Berkeley, Cal.; Vice-President, L. B. Curtis, Denver, Colo.; Secretary and Treasurer, Chas. G. Patrick, Goldfield, Nevada.

Hawthorne Water Works

Directors—Jno. F. Cannon, San Francisco, Cal.; Geo. T. Mills, E. B. Yerington, A. M. Ardery, F. E. Murphy, all of Carson City, Nevada.

Officers—President, Jno. F. Cannon, San Francisco, Cal.; Vice-President, Geo. T. Mills, Carson City, Nevada; Secretary and Treasurer, E. B. Yerington, Carson City, Nevada; Superintendent, G. B. Stannard, Hawthorne, Nevada.

Indian Springs Water Company

Directors—J. C. Brittain, Piedmont, Cal.; G. H. Brittain, Piedmont, Cal.; F. M. Butler, Oakland, Cal.; F. A. Koetitz, San Francisco, Cal.; F. J. Busch, Rhyolite, Nevada.

Officers—President, J. C. Brittain, Piedmont, Cal.; Vice-President, F. A. Koetitz, San Francisco, Cal.; Secretary and Treasurer, F. M. Butler, Oakland, Cal.; Manager, F. J. Busch, Rhyolite, Nevada.

Las Vegas Land and Water Company

Directors—W. H. Bancroft, Salt Lake City, Utah; J. Ross Clark, H. C. Nutt, W. H. Comstock, Los Angeles, Cal.; W. R. Bracken, Las Vegas, Nevada.

Officers—President, H. C. Nutt, Los Angeles, Cal.; Vice-President, W. R. Bracken, Las Vegas, Nevada; Secretary, W. H. Comstock, Los Angeles, Cal.; Treasurer, W. H. Leete, Los Angeles, Cal.

Manhattan Water Company

Directors—None.

Owners—Joseph E. Connor and M. E. Wilson, Manhattan, Nevada.

Mason Water, Light and Power Company

Directors—W. W. Armstrong and B. L. Cripps, of Salt Lake City, Utah; E. G. Kidder, Mason, Nevada.

Officers—President, W. W. Armstrong, Salt Lake City, Utah; Vice-President, B. L. Cripps, Salt Lake City, Utah; Secretary and Treasurer, E. G. Kidder, Mason, Nevada.

Reno Power, Light and Water Company

Directors—J. B. Lukes, Hugh Goodfellow, W. H. Orrick, A. S. Humphreys, H. L. Lanfar, C. F. Shaw, L. M. Reincke, all of San Francisco, Cal.

Officers—President, J. B. Lukes, Vice-President, W. H. Orrick; Secretary, H. L. Lanfar, all of San Francisco, Cal.; Treasurer, Henry B. Sawyer, Boston, Mass.; Asst. Treasurer, John T. G. Nichols, Boston, Mass.; Asst. Treasurer, Francis J. Gannon, Reno, Nevada.

Ruby Hill Water Works

Directors—None.

Owner—Fred Bartine, Eureka, Nevada.

Tonopah Sewer and Drainage Company

Directors—J. G. Crumley, L. L. Crumley, A. G. Raycraft, all of Tonopah, Nevada.

Officers—President and General Manager, J. G. Crumley, Tonopah, Nevada; Vice-President, L. L. Crumley, Tonopah, Nevada; Secretary, A. G. Raycraft, Tonopah, Nevada.

Virginia and Gold Hill Water Company

Directors—W. E. Dean, E. J. McCutchen, J. E. Walsh, W. S. Hobart, W. L. Dean, J. W. Twiggs, all of San Francisco, Cal.; D. C. Bates, San Rafael, Cal.

Officers—President, W. E. Dean, San Francisco, Cal.; Vice-President, E. J. McCutchen, San Francisco, Cal.; Secretary, D. C. Bates, San Rafael, Cal.; Treasurer, Wells-Fargo Nevada National Bank, San Francisco, Cal.

Virginia Ranch Land and Cattle Company

Directors—H. C. Dangberg, Manta J. Dangberg, Edna Nielsen, all of Gardnerville, Nevada; Bertha D. Cardinal, Wm. Dangberg, of Minden, Nevada.

Officers—President, H. C. Dangberg, Gardnerville, Nevada; Vice-President, M. J. Dangberg, Gardnerville, Nevada; Secretary, Bertha D. Cardinal, Minden, Nevada; Treasurer, Wm. Dangberg, Minden, Nevada.

Water Company of Tonopah

Directors—Van Horn Ely, Pittsburg, Pa.; B. N. Busch, New York, N. Y.; E. G. Wheeler, New York, N. Y.; Thos. W. Wilson, Wilmington, Del.; C. B. Zabriskie, New York, N. Y.

Officers—President, Van Horn Ely, Pittsburg, Pa.; Vice-President, E. G. Wheeler, New York, N. Y.; Secretary, H. F. MacNamara, New York, N. Y.; Treasurer, B. N. Busch, New York, N. Y.

Winnemucca Water and Light Company

Directors—Edw. Reinhart, Moses Reinhart, of Winnemucca, Nevada; Leopold Michels, M. J. Brandenstein, M. Willard, all of San Francisco, Cal.

Officers—President, Leopold Michels, San Francisco, Cal.; Vice-President, M. Willard, San Francisco, Cal.; Secretary, Edw. Reinhart, Winnemucca, Nevada; Treasurer, Moses Reinhart, Winnemucca, Nevada.

Wonder Water Company

Directors—Wm. Matson, Harry B. Gregg, R. H. Wright, F. S. Samuels, all of San Francisco, Cal.; E. S. Cunningham, Wonder, Nevada.

Officers—President, Wm. Matson; Vice-President, F. S. Samuels; Secretary and Treasurer, Harry B. Gregg.

ELECTRIC COMPANIES**City of Fallon Electric System**

Directors—Geo. E. Sherman, John Oats, J. C. Jones, Joe Jarvis, W. H. Reavis, L. W. Crehore, City Officials, all of Fallon, Nevada.

Officers—Not shown.

Consolidated Power and Telephone Company

Directors—F. A. Clark, E. W. Clark, John S. Park, W. S. Park, all of Las Vegas, Nevada.

Officers—President, F. A. Clark; Vice-President, E. W. Clark; Secretary and Treasurer, John S. Park; Manager, W. S. Park.

Douglas Milling and Power Company

Directors—F. W. Sarman, Wm. Graunke, L. N. Anderson, J. N. Anderson, all of Gardnerville, Nevada; Al. Karge, Carson City, Nevada.

Officers—President, F. W. Sarman; Vice-President, Wm. Graunke; Secretary, L. N. Anderson; Treasurer, J. N. Anderson, all of Gardnerville, Nevada.

Elko-Lamoille Power Company

Directors—L. J. Wintermantel, H. S. Taber, B. G. McBride, Webster Patterson, Frank Fernald, Sr., J. G. Scrugham, all of Elko, Nevada.

Officers—President, L. J. Wintermantel; Vice-President and Manager, B. G. McBride; Secretary and Treasurer, H. S. Taber, all of Elko, Nevada.

Ely Light and Power Company

Directors—Frank W. Holmes, Mount Vernon, N. Y.; H. A. Gray, New York, N. Y.; Arthur Smith, East Ely, Nevada; H. E. Dodge, Henry F. J. Knobloch, Bayonne, N. J.

Officers—President, Frank W. Holmes, Mount Vernon, N. Y.; Vice-President, H. A. Gray, New York, N. Y.; Secretary and Assistant Treasurer, Henry F. J. Knobloch, Bayonne, N. J.; Second Vice-President, Arthur Smith, East Ely, Nevada; Treasurer, H. E. Dodge.

Las Vegas Land and Water Company

Directors—W. H. Bancroft, Salt Lake City, Utah; J. Ross Clark, H. C. Nutt, W. H. Comstock, all of Los Angeles, Cal.; W. B. Bracken, Las Vegas, Nevada.

Officers—President, H. C. Nutt, Los Angeles, Cal.; Vice-President, W. B. Bracken, Las Vegas, Nevada; Secretary, W. H. Comstock; Treasurer, W. H. Leete; Auditor, C. C. Barry, all of Los Angeles, Cal.

Lovelock and Woolsey Light and Power Company

Directors and Officers—Not shown.

Mason Water, Light and Power Company

Directors—W. W. Armstrong, B. L. Cripps, Salt Lake City, Utah; E. G. Kidder, Mason, Nevada.

Officers—President, W. W. Armstrong, Salt Lake City, Utah; Vice-President, B. L. Cripps, Salt Lake City, Utah; Secretary and Treasurer, E. G. Kidder, Mason, Nevada.

The Nevada-California Power Company

Directors—Delos A. Chappell, Riverside, Cal.; Rodney Curtis, Denver, Colo.; Arthur B. West, Riverside, Cal.; Lawrence C. Phipps, Denver, Colo.; G. S. Wood, Lawrence C. Phipps, Jr., W. E. Porter, all of Denver, Colo.

Officers—President, Delos A. Chappell, Riverside, Cal.; Vice-Presidents, Arthur B. West, Riverside, Cal.; Rodney Curtis, G. S. Wood, of Denver, Colo.; Treasurer, Lawrence C. Phipps, Jr., Denver, Colo.; Secretary, W. E. Porter, Denver, Colo.

Pacific Power Company

Directors—Delos A. Chappell, Riverside, Cal.; A. E. Anderson, Geo. W. Hendry, of San Francisco, Cal.

Officers—President, Delos A. Chappell, Riverside, Cal.; Vice-President, A. E. Anderson, San Francisco, Cal.; Secretary and Treasurer, G. W. Campbell, San Francisco, Cal.; Manager and Assistant Secretary and Treasurer, W. N. Chatfield, Bodie, Cal.

Reno Power, Light and Water Company

Directors—J. B. Lukes, Hugh Goodfellow, W. H. Orrick, A. S. Humphreys, H. L. Lanfar, C. F. Shaw, L. M. Reincke, all of San Francisco, Cal.

Officers—President, J. B. Lukes, Vice-President, W. H. Orrick; Secretary, H. L. Lanfar, all of San Francisco, Cal.; Treasurer, Henry B. Sawyer, Boston, Mass.; Asst. Treasurer, John T. G. Nichols, Boston, Mass.; Asst. Treasurer, Francis J. Gannon, Reno, Nevada.

Southern Pacific Company (Carlin, Nevada)

Directors and Officers—Same as Southern Pacific Company, given in railroad report.

Steptoe Valley Smelting and Mining Company

Directors—S. W. Eccles, S. R. Guggenheim, Murray Guggenheim, W. E. Bennett, W. B. Thompson, J. N. Steele, all of New York, N. Y.; D. C. Jackling, Salt Lake City, Utah; Charles Hayden, Boston, Mass.; W. Hinkle Smith, Philadelphia, Pa.; Judd Stewart, New York, N. Y.; C. M. McNeill, Colorado Springs, Colo.

Officers—President, S. W. Eccles, New York, N. Y.; Vice-President, D. C.

Jackling, Salt Lake City, Utah; Secretary, W. E. Bennett, New York, N. Y.; Treasurer, Chas. K. Lipman, New York, N. Y.

The Truckee River General Electric Company

Directors—Chester M. Clark, William T. Crawford, Ernest I. Doe, Clement B. Ford, Alvah K. Todd, Charles F. Wallace, Guy L. Weymouth, all of Boston, Mass.

Officers—President, Guy L. Weymouth; Vice-President, William T. Crawford; Secretary, Alvah K. Todd; Treasurer, Henry B. Sawyer; Assistant Treasurer, J. F. G. Nichols, all of Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada; Manager, Geo. A. Campbell, Reno, Nevada; Clerk, Wadleigh B. Drummond, Portland, Me.

Verdi Lumber Company

Directors and Officers—Not shown.

Winnemucca Water and Light Company

Directors—Edward Reinhart, Moses Reinhart, of Winnemucca, Nevada; Leopold Michels, M. J. Brandenstein, M. Willard, of San Francisco, Cal.

Officers—President, Leopold Michels; Vice-President, M. Willard, of San Francisco, Cal.; Secretary, Edward Reinhart; Treasurer, Moses Reinhart, Winnemucca, Nevada.

GAS COMPANIES

Carson City Coal Gas Company

Directors—George A. Campbell, Reno, Nevada; H. A. Lemmon, Reno, Nevada; O. W. Tennant, Carson City, Nevada.

Officers—President and Manager, George A. Campbell; Secretary, H. A. Lemmon, both of Reno, Nevada; Treasurer, Henry B. Sawyer, Boston, Mass.; Assistant Treasurer, F. J. Gannon, Reno, Nevada.

Nevada Gas Company

Directors—John Martin, Ross, Cal.; C. R. Havens, L. P. Lowe, of San Francisco, Cal.

Officers—President, John Martin, Ross, Cal.; Vice-President, L. P. Lowe; Secretary, F. W. Pryor; Treasurer and General Manager, L. P. Lowe, all of San Francisco, Cal.

Reno Power, Light and Water Company

Directors and Officers—Same as electric utility.

GENERAL EXPENSES OF THE PUBLIC SERVICE COMMISSION OF
NEVADA FOR THE YEAR ENDING DECEMBER 31, 1914

Telegraph service.....	\$14.13
Paper and envelopes.....	11.60
Other stationery.....	60.20
Other stationery.....	60.20
Books and periodicals.....	18.10
Office stenographers.....	2,373.35
Meter inspection.....	26.00
Traveling expenses.....	445.65
Express charges.....	5.93
Bookbinding.....	36.00
Rent.....	240.00
Fuel.....	50.00
Miscellaneous.....	11.45
<hr/>	
Total.....	\$3,292.41

PUBLIC SERVICE COMMISSION LAW

An Act making the Railroad Commission of Nevada ex officio a Public Service Commission for the regulation and control of certain public utilities, prescribing the manner in which such public utilities shall be regulated and controlled, requiring such public utilities to furnish reasonably adequate service and facilities, prohibiting unjust and unreasonable charges for services rendered by such public utilities, providing penalties for violation of the provisions of this act, authorizing such Public Service Commission to appoint an expert engineer and to employ clerks and assistants, and making an appropriation for carrying out the provisions of this act.

[Approved March 23, 1911]

Public Service Commission Created.

SECTION 1. A public service commission is hereby created, whose duty it shall be to supervise and regulate the operations of the public utilities hereinafter named, such supervision and regulation to be in conformity with the provisions of this act.

Railroad Commission To Be Public Service Commission.

SEC. 2. The Railroad Commission of Nevada shall be, ex officio, the public service commission hereby created, and for the purposes of this act shall be known as and styled "Public Service Commission of Nevada." It shall provide itself with a seal bearing these words, by which its official acts shall be authenticated in all cases where a seal is required; and in the name, as above set forth, it may sue and be sued in the courts of the state and of the United States. The secretary of the Railroad Commission of Nevada shall act as secretary of the commission hereby created, but the business of the public service commission shall be kept entirely separate from that of the railroad commission.

Term "Public Utility" Defined.

SEC. 3. The term "public utility" within the meaning of this act shall embrace every corporation, company, individual, association of individuals, their lessees, trustees or receivers appointed by any court whatsoever, that now or hereafter may own, operate or control any plant or equipment, or any part of a plant or equipment within the state for the production, delivery or furnishing for or to other persons, firms, associations, or corporations, private or municipal, heat, light, power in any form or by any agency, water for business, manufacturing, agricultural or household use, or sewerage service whether within the limits of municipalities, towns or villages, or elsewhere; and the public service commission is hereby invested with full power of supervision, regulation and control of all such utilities, subject to the provisions of this act and to the exclusion of the jurisdiction, regulation and control of such utilities by any municipality, town or village.

Commission May Prescribe Rules of Procedure.

SEC. 4. In addition to the modes of procedure hereinafter prescribed in particular cases and classes of cases, said commission shall have power to prescribe rules of procedure, and to do all things necessary and convenient in the exercise of the powers by this act conferred upon the commission; *provided*, that nothing in this act shall be construed as vesting judicial powers in said commission, or as denying to any person, firm, association, corporation, municipality, county, town or village the right to test in a court of competent jurisdiction the legality or reasonableness of any final order made by the commission in the exercise of its duties or powers.

Charges for Utilities Must Be Reasonable and Just.

SEC. 5. Every public utility is required to furnish reasonably adequate service and facilities. The charge made by any public utility for any heat, light, water or power produced, transmitted, delivered or furnished or for any service to be rendered as, or in connection with, any public utility shall be reasonable and just, and every unjust and unreasonable charge is prohibited and declared unlawful.

Commission May Investigate All Public Utilities.

SEC. 6. The commission may, in its discretion, investigate and ascertain the value of all the property of every public utility actually used and useful for the convenience of the public. In making such investigation the commission may avail itself of all information contained in the assessment rolls of the various counties and the public records of the various branches of the state government or any other information obtainable.

All Public Utilities Must Report to Commission—Right of Examination.

SEC. 7. Every public utility shall keep and render to the commission, in manner and form prescribed by the commission, uniform and detailed accounts of all business transacted.

(a) Every public utility engaged directly or indirectly in any other business than those mentioned in section 3 of this act, shall, if required by the commission, keep and render in like manner and form the accounts of all other such business, in which case all the provisions of this act shall apply with like force and effect to the books, accounts, papers and records of such other business. The commission shall cause to be prepared suitable blanks for carrying out the purpose of this act, and shall when necessary furnish such blanks to each public utility. No public utility shall keep any other books, accounts, papers or records of the business transacted than those prescribed or approved by the commission. Each public utility shall have an office within this state, and shall keep in such office all such books, accounts, records or papers, none of which shall be removed at any time from the state except upon such conditions as may be prescribed by the commission.

(b) The accounts of all such public utilities shall be closed annually on the 30th day of June, a balance sheet taken promptly therefrom, and full annual reports of the business be made to the commission not later than the 15th day of September following the closing of the accounts. The reports shall be in such form as may be prescribed by the commission, and shall contain all the information deemed by the commission necessary for the proper performance of its duties. The commission may, at any time, call for desired information omitted from such

reports, or not provided for therein, whenever, in the judgment of the commission, such information is necessary.

(c) Any commissioner, or any person or persons authorized by the commission, shall have the right to examine the books, accounts, records and papers of any public utility, for the purpose of determining their correctness, and whether they are being kept in accordance with the rules and system prescribed by the commission.

Penalty for Failure to Make Report.

SEC. 8. Any officer, agent or person in charge of the books, accounts, records and papers, or any of them, of any public utility, who shall refuse or fail for a period of thirty days to furnish the commission with any report required by the provisions of this act, and any officer, agent or person in charge of any particular books, accounts, records or papers relating to the business of such public utility who shall refuse to permit any commissioner or other person duly authorized by the commission to inspect such books, accounts, records or papers on behalf of the commission, shall be subject to a fine of not less than one hundred dollars (\$100), or more than five hundred dollars (\$500), such fine to be recovered in a civil action upon the complaint of the commission in any court of competent jurisdiction; and each day's refusal or failure on the part of such officer, agent or person in charge shall be deemed a separate offense, and be subject to the penalty herein prescribed.

Commission to Make Annual Report.

SEC. 9. The commission shall make and publish annual reports for each calendar year showing its proceedings, which reports shall, as nearly as may be, conform in a general way to those of the railroad commission of this state, and be made at the same time. All the reports, records, accounts, books, files, papers and memoranda of every nature in the possession of the commission shall be open to the public, at all reasonable times, subject to the exception that when the commission deems it necessary, in the interest of the public, it may withhold from the public any facts or information in its possession for a period of not more than ninety days after the acquisition of such facts or information.

Commission to Fix Standards for Service—Commission May Procure Testing or Measuring Apparatus.

SEC. 10. The commission shall ascertain and prescribe for each kind of public utility adequate, convenient and serviceable standards for the measurement of quality, pressure, voltage or other conditions pertaining to the supply of the product or service rendered by any public utility, and prescribe reasonable regulations for the examination and testing of such products or service and for the measurement thereof. Any consumer, user or party served may have the quality or quantity of the product or the character of any service rendered by any public utility tested upon the payment of fees fixed by the commission, which fees, however, shall be paid by the public utility and repaid to the complaining party if the quality or quantity of the product or the character of the service be found by the commission defective or insufficient in a degree to justify the demand for testing; or the commission may apportion the fees between the parties as justice may require.

The commission may, in its discretion, purchase such materials, apparatus, and standard measuring instruments for such examinations and

tests as it may deem necessary. The commission shall have the right and power to enter upon any premises occupied by any public utility for the purpose of making the examination and tests provided for in this act and set up and use on such premises any necessary apparatus and appliances and occupy reasonable space therefor. Any public utility refusing to allow such examinations to be made as herein provided shall be subject to the penalties prescribed in section 8 of this act.

Utilities Companies Must File Schedules with Commission.

SEC. 11. Every public utility shall file with the commission within a time to be fixed by the commission, schedules which shall be open to public inspection, showing all rates, tolls and charges which it has established and which are in force at the time for any service performed or product furnished in connection therewith by any public utility controlled or operated by it. In connection with such schedule, and as a part of it, shall also be filed all rules and regulations that in any manner affect the rates charged or to be charged for any service or product. A copy or so much of said schedules as the commission shall deem necessary for the use of the public shall be printed in plain type and posted in every station or office of such public utility where payments are made by the consumers or users, open to the public, in such form and place as to be readily accessible to the public and conveniently inspected. When a schedule of joint rates or charges is or may be in force between two or more public utilities, such schedule shall, in like manner, be printed and filed with the commission, and so much thereof as the commission may deem necessary for the use of the public shall be posted conspicuously in every station or office as in this section above provided. No changes shall thereafter be made in any schedule, including schedules of joint rates or in the rules and regulations affecting any and all rates or charges except upon thirty days' notice to the commission and all such charges shall be plainly indicated, or by filing new schedules in lieu thereof thirty days prior to the time the same are to take effect; *provided*, that the commission, upon application of any public utility may prescribe a less time within which a reduction may be made. Copies of all new or amended schedules shall be filed, and posted in the stations and offices of public utilities as in the case of original schedules.

No Rebates or Discrimination in Rates Charged—Existing Contracts Not Disturbed.

SEC. 12. It shall be unlawful for any public utility to charge, demand, collect or receive a greater or less compensation for any service performed by it within the state or for any service in connection therewith than is specified in such printed schedules, including schedule of joint rates, as may at the time be in force, or to demand, collect or receive any rate, toll or charge not specified in such schedules. The rates, tolls and charges named therein shall be the lawful rates, tolls and charges until the same are changed as provided in this act. It shall likewise be unlawful for any public utility to grant any rebate, concession or special privilege to any consumer or user, which directly or indirectly shall or may have the effect of changing the rates, tolls, charges or payments, and any violation of the provisions of this section shall subject the violator to the penalty prescribed in section 10 of this

act. This, however, shall not have the effect of suspending, rescinding, invalidating or in any way affecting existing contracts.

Commission May Classify Service of Utilities.

SEC. 13. The commission may prescribe classifications of the service of all public utilities, and in such classifications may take into account the quantity used, the time when used, and any other reasonable consideration. Each public utility is required to conform its schedule of rates, tolls, and charges to such classifications, for which schedules the commission may, when necessary, prescribe the forms.

Commission May Adopt Rules Regarding Inspection, Etc.

SEC. 14. The commission shall have the power to adopt reasonable and proper rules and regulations relative to all inspections, tests, audits, and investigations, and to adopt and publish reasonable and proper rules to govern its proceedings and to regulate the mode and manner of all investigations and hearings held for the purpose of determining any question affecting public utilities; *provided*, that all such hearings shall be public.

Utilities Must Produce Accounts.

SEC. 15. The commission may require, by order to be served on any public utility in the same manner as a summons in a civil action, the production at such time and place as the commission may designate of any books, accounts, papers or records kept by such public utility in any office or place without the State of Nevada, or verified copies in lieu thereof, if the commission shall so direct, in order that an examination thereof may be made by the commission or under its direction, or for use as testimony. If any public utility shall refuse or fail to comply with such order, the said utility shall be subject to the liability named in section 8.

Expert May Be Employed.

SEC. 16. The commission shall have authority to employ an expert engineer at a salary of \$3,600 per annum and necessary traveling expenses and is invested with full power to remove such engineer whenever his services shall be unsatisfactory to the commission. The commission may employ and remove such other experts, clerks and assistants as it shall deem necessary, and fix their compensation.

Investigation of Unreasonable Charges, When.

SEC. 17. Upon a complaint made against any public utility by any mercantile, agricultural or manufacturing society or club, or by any body politic or municipal organization or by any person or persons, firm or firms, corporation or corporations, or association or associations, the same being interested, that any of the rates, tolls, charges or schedules of any joint rate or rates are in any respect unreasonable or unjustly discriminating, or that any regulations, measurements, practice or act whatsoever affecting or relating to the production, transmission or delivery or furnishing of heat, light, water or power, or any service in connection therewith is, in any respect, unreasonable, insufficient, or unjustly discriminatory, or that any service is inadequate, the commission shall proceed, with or without notice, to make such investigation as it may deem necessary. But no order affecting said rates, tolls, charges, schedules, regulations, measurements, practice or act complained of shall be entered without a formal hearing.

(a) The commission shall, prior to such formal hearing, notify the public utility complained of that complaint has been made, stating the substance thereof, or, if deemed necessary, accompanying the notice with a copy of the complaint, and ten days after such notice has been given, the commission may set a time for hearing.

(b) The commission shall give the public utility and the complainant or complainants at least ten days' notice of the time when and the place where such hearing will be held, at which hearing both the complainant and the public utility shall have the right to appear by counsel or otherwise, and be fully heard. Either party shall be entitled to an order by the commission for the appearance of witnesses or the production of books, papers, and documents containing material testimony. Witnesses appearing upon the order of the commission shall be entitled to the same fees and mileage as witnesses in civil cases in the courts of the state, and the same shall be paid out of the state treasury in the same manner as other claims against the state are paid; but no fees or mileage shall be allowed, unless the chairman of the commission shall certify to the correctness of the claim.

Disobedience of Summons Same as Contempt of Court.

SEC. 18. If any party ordered to appear before the commission as a witness shall fail to obey such order, the commission, or any member, or the secretary thereof, may apply to the clerk of the nearest district court for a subpoena commanding the attendance of said witness before the commission. It shall be the duty of such clerk to issue such subpoena, and of any peace officer to serve the same. Disobedience to such subpoena shall be deemed a contempt of court and punished accordingly.

Commission May Lower Rates, When.

SEC. 19. If upon such hearing and due investigation, the rates, tolls, charges, schedules or joint rates shall be found to be unjust, unreasonable, or unjustly discriminatory, or to be preferential or otherwise in violation of any of the provisions of this act, the commission shall have the power to fix and order substituted therefor such rate or rates, tolls, charges or schedules, as shall be just and reasonable. If it shall in like manner be found that any regulation, measurement, practice, act or service complained is unjust, unreasonable, insufficient, preferential, unjustly discriminatory, or otherwise in violation of the provisions of this act, or if it be found that the service is inadequate, or that any reasonable service cannot be obtained, the commission shall have power to substitute therefor such other regulations, measurements, practices, service or acts, and make such order relating thereto as may be just and reasonable.

(b) When complaint is made of more than one rate, charge or practice, the commission may, in its discretion, order separate hearings upon the several matters complained of and at such times and places as it may prescribe. No complaint shall at any time be dismissed because of the absence of direct damage to the complainant. The commission may at any time, upon its own motion, investigate any of the rates, tolls, charges, rules, regulations, practices, and service, and after a full hearing as above provided, by order make such changes as may be just and reasonable, the same as if a formal complaint had been made.

Depositions of Witnesses.

SEC. 20. The commission, or any party to any proceeding before it, may cause the depositions of witnesses to be taken in the manner prescribed by law for like depositions in civil actions.

Record of All Proceedings To Be Taken by Stenographer.

SEC. 21. A full and complete record shall be kept of all proceedings before the commission or its representative on any formal investigation, and all testimony shall be taken down by the stenographer appointed by the commission. Whenever any complaint is served upon the commission as hereinafter provided for the bringing of actions against the commission, before the action is reached for trial, the commission shall cause a certified copy of all proceedings held and testimony taken upon such investigation to be filed with the clerk of the court in which the action is pending.

No One Excused from Testifying on Grounds of Self-Incrimination.

SEC. 22. No person shall be excused from testifying, or from producing books and papers in any proceedings based upon or growing out of any alleged violation of the provisions of this act, on the ground of or for the reason that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate or subject him to penalty or forfeiture; but no person having so testified shall be prosecuted or subjected to any penalty or forfeiture for, or on account of, any transaction, matter or thing concerning which he may have testified or produced any documentary evidence; *provided*, that no person so testifying shall be exempted from prosecution or punishment for perjury in so testifying.

Refusal to Make Reports Punished.

SEC. 23. Any officer, agent, or employee of any public utility who shall wilfully fail or refuse to fill out and return any blanks as required by this act, or shall wilfully fail or refuse to answer any questions therein propounded, or shall knowingly or wilfully give a false answer to any such questions, or shall evade the answer to any such question, where the fact inquired of is within his knowledge, or who shall, upon proper demand, wilfully fail or refuse to exhibit to any commission or any commissioners, or any person also authorized to examine the same, any book, paper or account of such public utility which is in his possession or under his control, shall be subject to the penalty prescribed in section 8 of this act.

Commission to Enforce this Act—Attorney-General and District Attorneys to Prosecute.

SEC. 24. The commission shall inquire into any neglect or violations of the laws of this state by any such public utility as hereinbefore defined, doing business therein, or by the officers, agents, or employees thereof, and shall have the power, and it shall be its duty, to enforce the provisions of this act, and report all violations thereof to the attorney-general; upon the request of the commission it shall be the duty of the attorney-general, or the prosecuting attorney of the proper, or any county, to aid in any investigations, prosecutions, hearing, or trial had under the provisions of this act, and to institute and prosecute all necessary actions or proceedings for the enforcement of this act.

All Rates and Regulations Fixed by Commission *Prima Facie* Lawful.

SEC. 25. All rates, fares, charges, classifications and joint rates fixed by the commission shall be enforced, and shall be *prima facie* lawful, from the date of the order until changed or modified by the commission, or in pursuance of section 26 of this act. All regulations, practices and service, prescribed by the commission shall be enforced and shall be *prima facie* reasonable unless suspended or found otherwise in an action brought for that purpose, pursuant to the provisions of section 27 of this act, or until changed or modified by the commission itself upon satisfactory showing made.

Appeal to District Court, When—Actions to Have Precedence.

SEC. 26. Any party in interest being dissatisfied with an order of the commission fixing any rate or rates, fares, charges, classifications, joint rate or rates, or any order fixing any regulations, practices or services, may within ninety (90) days commence an action in the district court of the proper county against the commission and other interested parties as defendants to vacate and set aside any such order on the ground that the rate or rates, fares, charges, classifications, joint rate or rates, fixed in such order is unlawful or unreasonable, or that any such regulation, practice, or service, fixed in such order is unreasonable. The commission and other parties defendant shall file their answers to said complaint within thirty (30) days after the service thereof, whereupon such action shall be at issue and stand ready for trial upon twenty (20) days' notice to either party.

All actions brought under this section shall have precedence over any civil cause of a different nature pending in such court, and the court shall always be deemed open for the trial thereof, and the same shall be tried and determined as other civil actions; any party to such action may introduce evidence in addition to the transcript of the evidence offered to said commission.

(a) No injunction shall issue suspending or staying any order of the commission except upon application to the court or judge thereof, notice to the commission having been first given and hearing having been had thereon; *provided*, that all rates fixed by the commission shall be deemed reasonable and just, and shall remain in full force and effect until final determination by the courts having jurisdiction.

(b) If, upon the trial of such action, evidence shall be introduced by the plaintiff which is found by the court to be different from that offered upon the hearing before the commission, or additional thereto, the court, before proceeding to render judgment, unless the parties to such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the commission, and shall stay further proceedings in said action for fifteen (15) days from the date of such transmission. Upon receipt of such evidence the commission shall consider the same, and may later modify, amend or rescind its order relating to such rate or rates, fares, charges, classifications, joint rate or rates, regulation, practice or service complained of in said action and shall report its action thereon to said court within ten days from the receipt of such evidence.

(c) If the commission shall rescind its order complained of, the action shall be dismissed; if it shall alter, modify or amend the same, such altered, modified or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon,

as though made by the commission in the first instance. If the original order shall not be rescinded or changed by the commission, judgment shall be rendered upon such original order.

(d) Either party to said action within sixty (60) days after service of a copy of the order or judgment of the court may appeal or take the case up on error as in other civil actions. Where an appeal is taken to the Supreme Court of Nevada the cause shall, on the return of the papers to the higher court, be immediately placed on the calendar of the then pending term, and shall be assigned and brought to a hearing in the same manner as other causes on the calendar.

(e) In all actions under this act the burden of proof shall be upon the party attacking or resisting the order of the commission to show by clear and satisfactory evidence that the order is unlawful, or unreasonable, as the case may be.

Notice of Serious Accidents to Persons Given Commission.

SEC. 27. Every public utility shall, whenever an accident occurs in the conduct of its operation, causing death or personal injuries, give immediate notice thereof to the commission. If in its judgment the public interest requires it, the commission shall cause an investigation to be made forthwith, at such place and in such manner as the commission shall deem it best.

Penalties for Public Utility Violating this Act.

SEC. 28. If any public utility shall violate any provision of this act, or shall do any act herein prohibited, or shall fail, or refuse to perform any duty enjoined upon it, or upon failure of any public utility to place in operation any rate or joint rate, or do any act herein prohibited, for which a penalty has not been provided, or shall fail, neglect, or refuse to obey any lawful requirement or order made by the commission or any court, for every such violation, failure or refusal, such public utility shall be subject to the penalty prescribed by section 8 of this act.

All Reports to Commission Must Be Sworn To.

SEC. 29. Every annual report, record or statement required by this act to be made to the commission shall be sworn to by the proper officer, agent or person in charge of such public utility. Any intentionally false oath as to the correctness of such report, record or statement, shall be deemed perjury, and the person making such false oath shall, upon conviction, be punished as in the case of other perjuries.

Suits at Law—Attorney-General to Represent Commission.

SEC. 30. Any forfeiture or penalty herein provided shall be recovered and suit thereon shall be brought in the name of the State of Nevada in the district court of any county having jurisdiction of the defendant. The attorney-general of Nevada shall be the counsel in any proceeding, investigation, hearing or trial, prosecuted or defended by the commission, as also shall any prosecuting attorney selected by said commission, or other special counsel furnished said commission in any county where such action is pending.

Mandamus, When.

SEC. 31. In addition to all the other remedies provided by this act for the prevention and punishment of any and all violations of the provisions thereof, and all orders of the commission, the commission may

compel compliance with the provisions of this act and of the orders of the commission by proceedings in *mandamus*, injunction, or by other civil remedies.

Printing for Commission.

SEC. 32. Except in cases of emergency, all the necessary printing of the commission shall be done at the state printing office, and it is made the duty of the state printer to have such printing done as expeditiously as possible.

Traveling and Other Expenses.

SEC. 33. The commission and secretary, and such clerks and experts as may be employed, shall be entitled to receive from the state their necessary expenses while traveling on the business of the commission, including the cost of lodging and subsistence. Such expenditure shall be sworn to by the person who incurred the expenses and be approved by the chairman of the commission.

Each Section Independent of All Others as Regards Constitutionality.

SEC. 34. Each section of this act and every part of each section are hereby declared to be independent sections and parts of sections, and the holding of any section or part thereof to be void or inoperative for any cause shall not be deemed to affect any other section thereof.

Appropriation.

SEC. 35. For the purpose of carrying out the provisions of this act, the sum of \$5,000, exclusive of the amount named as the salary of the engineer, is hereby appropriated out of any moneys in the treasury not otherwise appropriated.

RULES AND REGULATIONS FOR GAS AND ELECTRIC SERVICE IN THE STATE OF NEVADA

RULE 1

A meter may be considered as correct, if, when passing gas at the rate of six cubic feet per hour per light capacity, it shows, in comparison with a standard gas-prover, an error which is not greater than 2 per cent.

RULE 2

No gas company shall allow a gas meter to remain in service for a period longer than three years without checking it for accuracy and readjusting it if found to be inaccurate.

RULE 3

Each company shall keep a record of all tests made on meters both before installation and while in service.

RULE 4

Each gas company shall provide itself with equipment necessary for testing meters, such equipment to consist of a standard meter prover with suitable accessories.

RULE 5

Each gas company shall make a test of the accuracy of a meter upon request of a consumer, provided such consumer does not make a request for tests more frequently than once in six months. A report giving the results of such tests shall be made to the consumer, and a complete record of such tests shall be forwarded to the Public Service Commission.

RULE 6

Upon formal application of any consumer to the Public Service Commission a test shall be made upon the consumer's meter by an inspector employed by the commission, such test to be made as soon as practicable after receipt of the application. For such a test a fee of one dollar and fifty cents (\$1.50) shall be paid by the consumer making the application for the test if the meter is found to be slow or correct within the allowable limits, and by the company owning the meter if the meter is found to be fast beyond the allowable limit.

RULE 7

Meter dials shall read directly in cubic feet of gas, and bills rendered periodically by the company shall designate the readings of the meter at the beginning and end of the time for which the bill is rendered, and give the dates at which the readings were taken.

RULE 8

The company furnishing gas, which, within a one-mile radius from the distribution center, gives a monthly average total heating value of not less than 550 B.T.U., with a minimum which shall never fall below 500 B.T.U., may be considered as giving adequate service as far as the heating value of the gas is concerned.

RULE 9

Each gas company, whose output exceeds five million cubic feet a year, shall equip itself with a standard calorimeter outfit, with which periodic tests upon the gas shall be made. A record of these tests shall be kept open for public inspection.

RULE 10

Gas pressure, as measured at meter inlets, shall never be less than $1\frac{1}{2}$ inches nor more than 6 inches of water pressure; and the daily variation of pressure at the inlet of any one meter on the system shall never be greater than 100 per cent of the minimum pressure.

RULE 11

Each company shall make frequent measurements of the pressure and pressure variations, and these shall be kept on record and open for public inspection.

RULE 12

In no case shall the gas contain more than thirty grains of total sulphur per 100 cubic feet, and not more than a trace of sulphur as sulphuretted hydrogen.

RULE 13

Each company shall keep a record of complaints which shall include the name and address of the consumer, the date, the nature of the complaint, and the remedy. A classified summary of these records shall be submitted to the commission on or before the 30th day of each month for the preceding month.

RULE 14

No electric meter which registers upon "no-load" shall be placed in service nor allowed to remain in service.

RULE 15

No electric meter shall be placed in service nor allowed to remain in service which has an error of registration in excess of 2 per cent on normal operating load or 3 per cent on a load of one-tenth the rated capacity of the meter.

RULE 16

Each electric service meter shall be tested and adjusted for accuracy at the time of its installation.

RULE 17

Each electric service meter shall be tested at least once a year; the test to be made by comparing the meter while connected in its place of service with suitable standards, on normal operating load, and on 10 per cent of its rated capacity.

RULE 18

A complete record shall be kept of all tests made on electric meters.

RULE 19

Each company supplying electric energy shall provide itself with suitable equipment for the testing of meters, and shall employ such methods as are approved by the Public Service Commission.

RULE 20A (Canceling Rule 20)

Each company supplying electrical energy shall make a test of the accuracy of a meter upon request of a consumer, provided such con-

sumer does not make request for tests more frequently than once in six months. Such test shall be made in the presence of consumer, with meter connected in its place of service, and such meter shall not be uncovered for adjustment until settlement of complaint is made. A report giving the results of such tests shall be made to the consumer, and a complete record of the same shall be forwarded to the Public Service Commission.

RULE 21

Upon formal application of any consumer to the Public Service Commission, a test shall be made upon the consumer's meter by an inspector employed by the commission, such test to be made as soon as practicable after the receipt of the application. For such a test a fee of one and one-half dollars (\$1.50) shall be paid by the consumer making application for the test if the meter is found to be slow or correct within the allowable limit, and by the company owning the meter if the meter is found to be fast beyond the allowable limit.

RULE 22

Each company supplying electrical energy shall maintain a record of all interruptions of service upon the entire system or major division of its system, and include in such record, time, duration, and cause of each interruption.

RULE 23

Each company supplying electrical energy on constant potential systems shall adopt and maintain a standard average voltage as measured at any consumer's cut-out, which shall remain constant from day to day, and vary during any one day by an amount not more than 6 per cent of the minimum value.

RULE 24

Each company supplying electrical energy for incandescent illumination shall, upon request, specifically inform its consumers as to the conditions under which efficient and economical illuminating service may be secured from its system.

RULE 25

Bills shall be rendered monthly by the electric company and shall designate the readings of the meter at the beginning and end of the time for which the bill is rendered, the amount used during the month, and the dates at which readings were taken.

RULE 26

Gas and electric companies shall furnish printed instructions as to the method of reading meters, and post copies of the same in a conspicuous place near the meter. They shall also have their meter readers instruct all customers in the correct method of reading their meters, and shall have their meter readers present to customers at the time meter is read a duplicate record of his reading, which shall give the present reading, the previous reading, the consumption for the month just passed, the consumption for the previous month, and the dates of the readings.

[Rules 1 to 24 inclusive, were adopted June 3, 1911, and went into effect September 3, 1911. Rules 20A, 25 and 26 were adopted September 12, 1911, and went into effect October 15, 1911.]

SAFETY REGULATIONS FOR ELECTRIC UTILITIES

[Adopted December 2, 1911]

The following regulations are issued for electric utilities in this state, for the purpose of protecting the lives of employees and securing greater safety for the public:

GENERAL RULES

1. All generators and motors operating at a potential above 500 volts shall have their base frames permanently and effectively grounded and be provided with name-plates giving their normal voltage and speed.
2. All switchboards controlling lines operating at a potential above 500 volts shall have suitable insulating platforms or rubber mats placed in front of them, and extending the whole length of the board.
3. The casings of all power and lighting transformers within power stations and substations shall be permanently and effectively grounded.
4. Transformer secondaries of distributing systems for lighting service shall be grounded in such a manner as to prevent a fatal accident in case the primary and secondary come in contact with each other.
5. Foremen shall be instructed to see that safety belts are used by all linemen when they are working on poles or other structures.
6. No employee in any department shall be allowed to go on shift if he reports for duty in such physical or mental condition that his personal safety or the safety of others may be endangered by assuming his duties in such condition.
7. No employee in any department shall be allowed to work under such conditions that his personal safety or the safety of others may be endangered, due to his incompetence or inexperience.

HIGH-TENSION SYSTEMS

8. All electric utilities operating systems at pressures above 5,000 volts shall prepare regulations for the protection of their employees, such regulations to be printed and issued to each employee.
9. The printed regulations shall show plainly the organization of the company so that each employee may know what are his own duties and responsibilities and the duties and responsibilities of each official of the company.
10. "Resuscitation from Electric Shock" rules shall be posted, and boxes with first-aid medical supplies shall be maintained in all company power houses, substations, and patrol houses.
11. All employees shall be instructed in the treatment for electric shock.

HIGH-TENSION POWER STATIONS

12. No work shall be done on apparatus or structures where the workman's person is necessarily nearer to any part unprotected under

voltage than the distances specified below, and for intermediate voltages proportional distances:

On 100,000-volt lines or apparatus.....	6 feet
On 60,000-volt lines or apparatus.....	4 feet
On 20,000-volt lines or apparatus.....	3 feet
On 5,000-volt lines or apparatus.....	2 feet

13. No visitors shall be allowed in a high-tension power station or substation unattended. They must be conducted by a station attendant or other employee.

14. All lines or apparatus shall be grounded and short-circuited after being disconnected from the source of voltage, before work may be done on such parts, or at a distance from them less than that specified in 12.

HIGH-TENSION STATION OPERATORS

15. Station and substation operators shall keep a log-book or report, showing when lines entering or leaving their respective stations are cut in or cut out, and as far as possible the reason such cut-in or cut-out occurred.

16. The retiring operator shall call the attention of the relieving operator to any unusual conditions of the station. Upon taking charge the relieving operator shall make an inspection of the station apparatus and then sign the log-book or report in acknowledgment of his being familiar with the conditions at the station.

17. When any line is cut out at the station in order to permit work being done on it, the operator shall place on the switch which controls said line the sign "Men on Line," and shall put a note on the sign stating by whose orders the line was killed and by whose orders the line shall again be put into service. This record shall also be shown on the station log-book or report.

18. In every case where an order is received by telephone or verbally it must be repeated back to the person giving the same and the repetition acknowledged by the person giving the order before permitting men to work on a line.

HIGH-TENSION LINE OPERATION

19. The operation of all high-tension lines shall be in charge of a chief operator or district foreman who shall issue orders for the operation of all disconnecting and oil switches, fuses at branch-line taps, killing lines for repair or other work on lines and in substations.

20. Blocking devices shall be used to prevent the closing of disconnecting switches and circuit breakers, and plainly printed signs "Men on Line" shall be hung on controlling switch in all cases where men are working on high-tension lines.

21. All lines and apparatus shall be considered as under voltage at all times, and no work shall be done except in accordance with the following rules:

First—The man in charge of the work shall ask for the line or apparatus in person or by telephone to the station or stations controlling the line, stating the nature of the work to be done.

Second—After the station operator has the section of line or apparatus killed and protected by open disconnecting switches, he shall record the name of the man who has called for the line on the log-sheet or report.

Third—The operator shall then tell the man in charge of the work that the line is dead, and that it will be kept dead until he reports either in person or by telephone that he is clear.

Fourth—When the work has been completed the man who called for the line shall report clear to the station or stations at which he was marked up, either by telephone or in person. The operator shall then mark the time of clearing on the log-sheet or report.

22. Line-disconnecting switches must always be regarded as being under voltage and handled accordingly.

HIGH-TENSION LINE REPAIRS AND MAINTENANCE

23. No foreman, patrolman, lineman or other person shall be permitted to do any work on a high-tension line without first receiving a statement from the chief operator that the line is dead and grounded and will be kept so until clearance is received.

24. Having received assurance that the line is dead is not sufficient protection, and the workman shall be cautioned to do no work until he tests with grounded wire the line to be worked on.

The method of grounding the line at stations shall be as follows:

Cables of sufficient length and with a carrying capacity equal to the line shall be provided. Carefully ground one end of the cable, then attach the grounded wire to the conductor to be grounded in such a manner as to make good contact and a good ground.

Ground each conductor separately in the same manner, and if the line can be made alive at more than one point, or where other high-tension lines closely parallel or cross the line to be worked on, then both ends of the line must be grounded. When the work is finished, first detach the ground cables from the lines before disconnecting from the ground.

25. High-tension lines should not approach other pole lines which parallel them nearer than a distance equal to the height of the taller pole line. High-tension lines should not be on the same pole with other wires (except signal or telephone wires used by the company operating the high-tension system).

26. High-tension lines must not be carried so near buildings as to interfere with or endanger the lives of firemen when in the performance of their duties.

27. Trees should not be permitted to stand within striking distance of high-tension lines should they fall toward the line.

TELEPHONE LINES

28. Branch lines may be run to residences, offices or other buildings from a private telephone line which is on the same poles with a high-tension system, but in all such cases such branch lines must be protected by fuses and ground protectors. Such branch lines, however, shall not be permanently connected to the main telephone line, but connection must be made to same by attendant at substation or power station when required and always disconnected when not in use.

29. Insulated platforms should be placed beneath all such telephones in offices, residences, substations, and power stations to protect the users of same.

30. No telephone wires shall be strung on high-tension pole lines while the high-tension lines are under voltage.

HIGH-TENSION LINE CROSSINGS

31. In all cases where high-tension lines cross other lines, some method of protecting the low-tension lines must be adopted. One of the methods suggested in the "National Electric Code" for 1911, Rule 13, or some other method equally as good, will be accepted.

32. When 1,000 to 5,000-volt feeder lines are carried on the same poles with low-tension distributing lines, service wires and telephone wires, the former shall be placed at least three feet above the other lines.

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STATE OF NEVADA

ANNUAL REPORT

OF THE

Insurance Commissioner

1913

J. EGGERS

Insurance Commissioner



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT

1914



REPORT OF INSURANCE COMMISSIONER

To His Excellency the Governor:

The following statement of the business transacted by fire, life, accident, casualty, and surety insurance companies for the year ending December 31, 1913, is respectfully submitted.

J. EGGERS,

State Controller and ex officio Insurance Commissioner.

FIRE INSURANCE COMPANIES

AACHEN AND MUNICH FIRE INSURANCE COMPANY

AIX-LA-CHAPELLE, GERMANY

Capital (deposited)	\$345,000.00		
Assets	2,589,572.11		
Liabilities, exclusive of capital and net surplus	1,414,719.06		
		<i>Income</i>	
Premiums	\$1,252,184.25		
Other sources	99,985.31		
Total income, 1913	\$1,352,119.56		
		<i>Expenditures</i>	
		Losses	\$589,575.65
		Dividends	None
		Other expenditures	640,784.42
		Total expenditures, 1913	\$1,230,360.07
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$189,528,398.00
		Premiums thereon	1,866,887.01
		Losses incurred	579,383.87

Nevada Business

Risks written	\$105,969.00
Premiums received	2,577.78
Losses paid	2,047.22
Losses incurred	2,047.22

ÆTNA INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$5,000,000.00		
Assets	22,481,250.34		
Liabilities, exclusive of capital and net surplus	10,571,860.45		
		<i>Income</i>	
Premiums	\$9,448,471.44		
Other sources	1,456,471.32		
Total income, 1913	\$10,903,942.76		
		<i>Expenditures</i>	
		Losses	\$5,519,794.88
		Dividends	900,000.00
		Other expenditures	3,751,968.61
		Total expenditures, 1913	\$10,171,763.39
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$978,943,592.00
		Premiums thereon	11,444,157.75
		Losses incurred	5,531,250.23

Nevada Business

Risks written	\$588,112.50
Premiums received	16,821.70
Losses paid	4,395.59
Losses incurred	6,193.44

AGRICULTURAL FIRE INSURANCE COMPANY

WATERTOWN, NEW YORK

Capital (paid up in cash)	\$500,000.00		
Assets	4,302,768.37		
Liabilities, exclusive of capital and net surplus	2,252,131.47		
		<i>Income</i>	
Premiums	\$1,700,810.23		
Other sources	199,480.91		
Total income, 1913	\$1,900,291.14		
		<i>Expenditures</i>	
		Losses	\$317,149.48
		Dividends	75,000.00
		Other expenditures	749,255.90
		Total expenditures, 1913	\$1,641,405.38
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$276,490,300.00
		Premiums thereon	2,709,688.44
		Losses incurred	814,608.23

Nevada Business

Risks written	\$198,700.00
Premiums received	4,236.74
Losses paid	2,637.45
Losses incurred	5,321.02

REPORT OF INSURANCE COMMISSIONER

ALLIANCE INSURANCE COMPANY

PHILADELPHIA, PENNSYLVANIA

Capital (paid up in cash)	\$750,000.00	Expenditures	
Assets	2,278,199.77	Losses	\$572,895.05
Liabilities, exclusive of capital and net surplus	837,489.32	Dividends	60,000.00
		Other expenditures	252,647.91
Income		Total expenditures, 1913	\$885,542.96
Premiums	\$997,878.52	Fire Insurance Business, 1913	
Other sources	92,724.63	Risks written	\$90,534,887.00
Total income, 1913	\$1,090,603.15	Premiums thereon	1,036,165.89
		Losses incurred	

Nevada Business

Risks written	\$109,250.00
Premiums received	2,501.27
Losses paid	1,154.07
Losses incurred	1,154.07

AMERICAN CENTRAL INSURANCE COMPANY

SAINT LOUIS, MISSOURI

Capital (paid up in cash)	\$2,000,000.00	Expenditures	
Assets	5,413,218.67	Losses	\$1,922,627.69
Liabilities, exclusive of capital and net surplus	3,383,138.97	Dividends	119,595.00
		Other expenditures	1,342,518.43
Income		Total expenditures, 1913	\$3,385,131.12
Premiums	\$3,374,992.22	Fire Insurance Business, 1913	
Other sources	198,767.42	Risks written	\$484,766,842.00
Total income, 1913	\$3,573,759.64	Premiums thereon	5,344,368.75
		Losses incurred	1,916,467.21

Nevada Business

Risks written	\$94,688.00
Premiums received	2,198.37
Losses paid	4,272.06
Losses incurred	4,272.06

ATLAS INSURANCE COMPANY (Limited)

LONDON, ENGLAND

Capital (deposited)	\$300,000.00	Expenditures	
Assets	2,947,026.38	Losses	\$952,382.45
Liabilities, exclusive of capital and net surplus	1,869,763.23	Dividends	None
		Other expenditures	712,271.05
Income		Total expenditures, 1913	\$1,664,653.50
Premiums	\$1,752,361.21	Fire Insurance Business, 1913	
Other sources	103,209.32	Risks written	\$266,743,965.00
Total income, 1913	\$1,855,570.53	Premiums thereon	2,630,487.15
		Losses incurred	903,168.05

Nevada Business

Risks written	\$434,818.00
Premiums received	10,782.59
Losses paid	5,147.44
Losses incurred	5,147.44

BALKAN NATIONAL INSURANCE COMPANY

SOFIA, BULGARIA

Capital (deposited)	\$200,000.00		
Assets	1,860,150.33		
Liabilities, exclusive of capital and net surplus	1,325,113.24		
		<i>Income</i>	
Premiums	\$1,862,700.05		
Other sources	203,287.18		
Total income, 1913	\$2,065,987.23		
		<i>Expenditures</i>	
		Losses	\$1,052,119.80
		Dividends	None
		Other expenditures	640,766.78
		Total expenditures, 1913	\$1,692,886.58
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$167,530,908.00
		Premiums thereon	2,419,114.49
		Losses incurred	1,081,280.80

Nevada Business

Risks written	\$63,360.00
Premiums received	1,326.24
Losses paid	293.47
Losses incurred	293.47

CALEDONIAN INSURANCE COMPANY

EDINBURGH, SCOTLAND

Capital (deposited)	\$325,000.00		
Assets	2,250,445.10		
Liabilities, exclusive of capital and net surplus	1,613,837.69		
		<i>Income</i>	
Premiums	\$1,419,643.57		
Other sources	96,119.74		
Total income, 1913	\$1,515,763.31		
		<i>Expenditures</i>	
		Losses	\$693,971.26
		Dividends	None
		Other expenditures	747,355.62
		Total expenditures, 1913	\$1,441,326.88
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$212,708,057.00
		Premiums thereon	2,385,248.24
		Losses incurred	698,131.42

Nevada Business

Risks written	\$230,528.00
Premiums received	5,054.94
Losses paid	5,405.88
Losses incurred	5,405.88

CALIFORNIA INSURANCE COMPANY

SAN FRANCISCO, CALIFORNIA

Capital (paid up in cash)	\$400,000.00		
Assets	1,140,865.35		
Liabilities, exclusive of capital and net surplus	549,229.14		
		<i>Income</i>	
Premiums	\$482,561.54		
Other sources	64,415.67		
Total income, 1913	\$546,977.11		
		<i>Expenditures</i>	
		Losses	\$290,969.11
		Dividends	55,000.00
		Other expenditures	217,956.83
		Total expenditures, 1913	\$563,925.94
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$32,577,399.00
		Premiums thereon	1,137,849.15
		Losses incurred	

Nevada Business

Risks written	\$279,182.00
Premiums received	5,080.51
Losses paid	8,801.75
Losses incurred	9,595.94

REPORT OF INSURANCE COMMISSIONER

CITIZENS INSURANCE COMPANY

SAINT LOUIS, MISSOURI

Capital (paid up in cash)	\$200,000.00	Losses	<i>Expenditures</i>	
Assets	810,840.34	Dividends		\$331,051.50
Liabilities, exclusive of capital and net surplus	451,629.35	Other expenditures		23,000.00
				165,122.45
		Total expenditures, 1913		\$519,173.95
			<i>Fire Insurance Business, 1913</i>	
<i>Income</i>		Risks written		\$162,067,971.00
Premiums	\$457,951.95	Premiums thereon		1,892,823.16
Other sources	32,241.35	Losses incurred		317,290.50
Total income, 1913	\$490,193.30			

Nevada Business

Risks written	\$229,997.00
Premiums received	4,810.88
Losses paid	125.62
Losses incurred	129.61

COMMERCIAL UNION ASSURANCE COMPANY (Limited)

LONDON, ENGLAND

Capital (deposited)	\$550,000.00	Losses	<i>Expenditures</i>	
Assets	7,441,933.76	Dividends		\$2,482,131.54
Liabilities, exclusive of capital and net surplus	4,973,560.34	Other expenditures		None
				2,889,338.55
		Total expenditures, 1913		\$5,371,470.09
<i>Income</i>			<i>Fire Insurance Business, 1913</i>	
Premiums	\$4,725,717.31	Risks written		\$630,180,137.00
Other sources	641,703.87	Premiums thereon		6,301,750.70
Total income, 1913	\$5,367,421.18	Losses incurred		2,514,739.02

Nevada Business

Risks written	\$181,370.00
Premiums received	2,996.10
Losses paid	5,481.25
Losses incurred	5,481.25

CONCORDIA FIRE INSURANCE COMPANY

MILWAUKEE, WISCONSIN

Capital (paid up in cash)	\$600,000.00	Losses	<i>Expenditures</i>	
Assets	2,367,792.38	Dividends		\$665,114.37
Liabilities, exclusive of capital and net surplus	1,345,842.42	Other expenditures		60,000.00
				604,891.30
		Total expenditures, 1913		\$1,330,005.67
<i>Income</i>			<i>Fire Insurance Business, 1913</i>	
Premiums	\$1,169,905.60	Risks written		\$162,939,054.00
Other sources	184,812.86	Premiums thereon		1,846,925.14
Total income, 1913	\$1,294,718.46	Losses incurred		671,627.53

Nevada Business

Risks written	None
Premiums received	None
Losses paid	None
Losses incurred	None

CONNECTICUT FIRE INSURANCE COMPANY
HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$1,000,000.00	<i>Expenditures</i>	
Assets	6,761,649.25	Losses	\$2,168,727.02
Liabilities, exclusive of capital and net surplus	4,439,140.35	Dividends	980,000.00
		Other expenditures	1,690,071.78
<i>Income</i>		Total expenditures, 1913	\$4,788,798.80
Premiums	\$3,888,021.66	<i>Fire Insurance Business, 1913</i>	
Other sources	833,156.40	Risks written	\$492,405,512.00
Total income, 1913	\$4,221,178.06	Premiums thereon	5,314,099.13
		Losses incurred	

Nevada Business

Risks written	\$498,144.00
Premiums received	9,540.47
Losses paid	6,106.31
Losses incurred	6,106.31

CONTINENTAL FIRE INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	27,628,476.64	Losses	\$4,288,237.47
Liabilities, exclusive of capital and net surplus		Dividends	1,000,000.00
		Other expenditures	4,363,270.88
<i>Income</i>		Total expenditures, 1913	\$9,651,508.35
Premiums	\$8,096,898.23	<i>Fire Insurance Business, 1913</i>	
Other sources	2,117,939.38	Risks written	\$1,066,892,067.00
Total income, 1913	\$10,213,832.61	Premiums thereon	10,511,407.96
		Losses incurred	4,390,570.21

Nevada Business

Risks written	\$334,986.00
Premiums received	5,263.51
Losses paid	4,535.06
Losses incurred	4,535.06

DELAWARE UNDERWRITERS OF THE WESTCHESTER FIRE
INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$300,000.00	<i>Expenditures</i>	
Assets	5,218,653.81	Losses	\$1,880,901.78
Liabilities, exclusive of capital and net surplus	3,639,882.08	Dividends	120,000.00
		Other expenditures	1,367,792.88
<i>Income</i>		Total expenditures, 1913	\$3,368,694.66
Premiums	\$3,231,510.88	<i>Fire Insurance Business, 1913</i>	
Other sources	225,211.44	Risks written	\$510,826,970.00
Total income, 1913	\$3,456,722.32	Premiums thereon	5,320,486.39
		Losses incurred	1,841,736.92

Nevada Business

Risks written	\$94,985.00
Premiums received	3,369.03
Losses paid	1,013.28
Losses incurred	1,013.28

REPORT OF INSURANCE COMMISSIONER

DETROIT FIRE AND MARINE INSURANCE COMPANY

DETROIT, MICHIGAN

Capital (paid up in cash)	\$500,000.00		
Assets	2,278,089.42	Expenditures	
Liabilities, exclusive of capital and net surplus	703,332.59	Losses	\$361,550.13
		Dividends	65,000.00
		Other expenditures	315,156.35
		Total expenditures, 1913	\$741,706.48
Income		Fire Insurance Business, 1913	
Premiums	\$723,495.08	Risks written	\$89,423,300.00
Other sources	100,877.54	Premiums thereon	1,043,846.44
Total income, 1913	\$824,372.62	Losses incurred	363,875.69

Nevada Business

Risks written	\$37,862.00
Premiums received	618.62
Losses paid	253.01
Losses incurred	408.01

FIDELITY-PHENIX FIRE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$2,500,000.00		
Assets	14,958,097.71	Expenditures	
Liabilities, exclusive of capital and net surplus	8,278,040.79	Losses	\$3,281,196.74
		Dividends	250,000.00
		Other expenditures	3,844,811.93
		Total expenditures, 1913	\$7,376,008.67
Income		Fire Insurance Business, 1913	
Premiums	\$6,289,839.55	Risks written	\$811,755,400.00
Other sources	907,193.68	Premiums thereon	8,576,673.44
Total income, 1913	\$7,197,033.23	Losses incurred	3,186,006.94

Nevada Business

Risks written	\$79,978.00
Premiums received	1,342.63
Losses paid	445.61
Losses incurred	678.71

FIRE ASSOCIATION OF PHILADELPHIA

PHILADELPHIA, PENNSYLVANIA

Capital (paid up in cash)	\$750,000.00		
Assets	9,164,808.16	Expenditures	
Liabilities, exclusive of capital and net surplus	5,845,943.32	Losses	\$2,265,771.32
		Dividends	300,000.00
		Other expenditures	1,746,884.74
		Total expenditures, 1913	\$4,312,656.06
Income		Fire Insurance Business, 1913	
Premiums	\$4,281,114.35	Risks written	\$540,078,643.00
Other sources	402,102.01	Premiums thereon	6,048,585.98
Total income, 1913	\$4,683,216.36	Losses incurred	2,265,452.24

Nevada Business

Risks written	\$502,675.00
Premiums received	12,450.18
Losses paid	15,164.94
Losses incurred	19,414.94

FIREMAN'S FUND INSURANCE COMPANY
SAN FRANCISCO, CALIFORNIA

Capital (paid up in cash)	\$1,500,000.00	<i>Expenditures</i>	
Assets	9,884,871.84	Losses	\$3,931,563.27
Liabilities, exclusive of capital and net surplus	6,113,626.54	Dividends	240,000.00
		Other expenditures	2,900,125.21
<i>Income</i>		Total expenditures, 1913	\$7,071,689.48
Premiums	\$7,462,946.51	<i>Fire Insurance Business, 1913</i>	
Other sources	399,865.38	Risks written	\$731,432,593.00
Total income, 1913	\$7,862,811.89	Premiums thereon	8,119,149.08
		Losses incurred	4,086,935.13

Nevada Business

Risks written	\$494,236.00
Premiums received	10,274.81
Losses paid	9,224.67
Losses incurred	8,418.73

FIRE REASSURANCE COMPANY
PARIS, FRANCE

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	1,431,664.75	Losses	\$747,385.14
Liabilities, exclusive of capital and net surplus	1,009,305.69	Dividends	None
		Other expenditures	421,311.19
<i>Income</i>		Total expenditures, 1913	\$1,168,696.33
Premiums	\$1,350,690.63	<i>Fire Insurance Business, 1913</i>	
Other sources	71,577.95	Risks written	\$156,817,015.00
Total income, 1913	\$1,422,268.58	Premiums thereon	1,687,100.26
		Losses incurred	832,156.14

Nevada Business

Risks written	\$76,455.00
Premiums received	1,557.20
Losses paid	9.59
Losses incurred	13.59

FIRST NATIONAL FIRE INSURANCE COMPANY
WASHINGTON, DISTRICT OF COLUMBIA

Capital (paid up in cash)	\$791,955.00	<i>Expenditures</i>	
Assets	1,630,979.86	Losses	\$150,853.63
Liabilities, exclusive of capital and net surplus	239,429.58	Dividends	None
		Other expenditures	575,353.58
<i>Income</i>		Total expenditures, 1913	\$726,207.21
Premiums	\$404,978.00	<i>Fire Insurance Business, 1913</i>	
Other sources	998,683.37	Risks written	\$55,927,875.00
Total income, 1913	\$1,403,661.37	Premiums thereon	561,722.47
		Losses incurred	189,911.65

Nevada Business

Risks written	\$113,350.00
Premiums received	2,493.60
Losses paid	979.61
Losses incurred	979.61

REPORT OF INSURANCE COMMISSIONER

FIRST REINSURANCE COMPANY
HARTFORD, CONNECTICUT

Capital (paid up in cash).....	\$500,000.00	Losses.....	<i>Expenditures</i> \$202,900.31
Assets.....	1,544,620.62	Dividends.....	None
Liabilities, exclusive of capital and net surplus.....	524,904.76	Other expenditures.....	333,126.82
<i>Income</i>		Total expenditures, 1913.....	\$536,027.13
Premiums.....	\$1,062,952.12	<i>Fire Insurance Business, 1913</i>	
Other sources.....	45,471.34	Risks written.....	\$73,430,755.00
Total income, 1913.....	\$1,108,423.46	Premiums thereon.....	782,784.04
		Losses incurred.....	278,407.31

Nevada Business

Risks written.....	\$264,246.00
Premiums received.....	5,429.33
Losses paid.....	33.49
Losses incurred.....	1,548.49

FIRST BULGARIAN INSURANCE COMPANY

RUSTCHUK, BULGARIA

Capital (deposited).....	\$200,000.00	Losses.....	<i>Expenditures</i> \$639,247.15
Assets.....	1,299,316.30	Dividends.....	None
Liabilities, exclusive of capital and net surplus.....	921,413.14	Other expenditures.....	410,596.27
<i>Income</i>		Total expenditures, 1913.....	\$1,109,843.42
Premiums.....	\$1,261,577.77	<i>Fire Insurance Business, 1913</i>	
Other sources.....	204,772.39	Risks written.....	\$145,288,517.00
Total income, 1913.....	\$1,466,350.16	Premiums thereon.....	1,635,561.97
		Losses incurred.....	767,281.15

Nevada Business

Risks written.....	\$31,351.00
Premiums received.....	515.05
Losses paid.....	None
Losses incurred.....	None

FIRST RUSSIAN INSURANCE COMPANY

ST. PETERSBURG, RUSSIA

Capital (deposited).....	\$223,000.00	Losses.....	<i>Expenditures</i> \$619,374.33
Assets.....	1,355,737.87	Dividends.....	None
Liabilities, exclusive of capital and net surplus.....	970,194.44	Other expenditures.....	562,429.64
<i>Income</i>		Total expenditures, 1913.....	\$1,181,803.97
Premiums.....	\$1,145,556.43	<i>Fire Insurance Business, 1913</i>	
Other sources.....	46,493.28	Risks written.....	\$159,646,571.00
Total income, 1913.....	\$1,192,049.71	Premiums thereon.....	1,510,893.12
		Losses incurred.....	618,000.25

Nevada Business

Risks written.....	\$84,009.00
Premiums received.....	2,390.61
Losses paid.....	1,035.28
Losses incurred.....	910.28

FRANKONA REINSURANCE COMPANY
FRANKFORT-ON-THE-MAIN, GERMANY

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	580,388.21	Losses	\$144,163.14
Liabilities, exclusive of capital and net surplus	228,923.11	Dividends	None
		Other expenditures	146,641.67
<i>Income</i>		Total expenditures, 1913	\$289,804.81
Premiums	\$276,308.69	<i>Fire Insurance Business, 1913</i>	
Other sources	22,717.02	Risks written	\$30,653,690.00
Total income, 1913	\$299,020.71	Premiums thereon	848,263.88
		Losses incurred	152,906.86

Nevada Business

Risks written	\$51,228.00
Premiums received	1,076.26
Losses paid	798.06
Losses incurred	798.06

GERMAN ALLIANCE INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$400,000.00	<i>Expenditures</i>	
Assets	1,846,013.24	Losses	\$336,748.22
Liabilities, exclusive of capital and net surplus	595,539.67	Dividends	60,000.00
		Other expenditures	274,854.79
<i>Income</i>		Total expenditures, 1913	\$671,603.01
Premiums	\$628,326.85	<i>Fire Insurance Business, 1913</i>	
Other sources	81,866.58	Risks written	\$335,904,785.00
Total income, 1913	\$710,193.43	Premiums thereon	3,419,541.77
		Losses incurred	332,376.86

Nevada Business

Risks written	\$38,420.00
Premiums received	745.54
Losses paid	1,346.09
Losses incurred	1,346.09

GERMAN AMERICAN INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	21,724,918.16	Losses	\$4,812,718.81
Liabilities, exclusive of capital and net surplus	10,479,062.61	Dividends	600,000.00
		Other expenditures	3,602,290.32
<i>Income</i>		Total expenditures, 1913	\$9,015,009.13
Premiums	\$9,069,134.45	<i>Fire Insurance Business, 1913</i>	
Other sources	1,063,639.16	Risks written	\$1,631,474,905.00
Total income, 1913	\$10,132,773.60	Premiums thereon	15,241,675.12
		Losses incurred	4,881,751.83

Nevada Business

Risks written	\$287,233.00
Premiums received	6,475.95
Losses paid	2,741.42
Losses incurred	2,741.42

REPORT OF INSURANCE COMMISSIONER

GLOBE AND RUTGERS FIRE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$400,000.00	<i>Expenditures</i>	
Assets	8,020,276.62	Losses	\$2,508,918.78
Liabilities, exclusive of capital and net surplus	4,405,149.96	Dividends	160,000.00
		Other expenditures	1,236,999.11
<i>Income</i>		Total expenditures, 1913	\$3,905,917.89
Premiums	\$4,452,097.68	<i>Fire Insurance Business, 1913</i>	
Other sources	568,988.91	Risks written	\$658,599,111.00
Total income, 1913	\$5,021,086.59	Premiums thereon	6,559,668.23
		Losses incurred	2,571,006.78

Nevada Business

Risks written	\$210,900.00
Premiums received	5,817.16
Losses paid	646.73
Losses incurred	1,196.73

HARTFORD FIRE INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	26,625,973.85	Losses	\$8,812,707.68
Liabilities, exclusive of capital and net surplus	16,977,461.72	Dividends	800,000.00
		Other expenditures	6,840,154.10
<i>Income</i>		Total expenditures, 1913	\$16,452,861.78
Premiums	\$16,454,395.02	<i>Fire Insurance Business, 1913</i>	
Other sources	1,078,501.66	Risks written	\$2,034,164,688.00
Total income, 1913	\$17,532,896.68	Premiums thereon	21,313,778.90
		Losses incurred	8,791,311.23

Nevada Business

Risks written	\$1,857,277.00
Premiums received	33,028.96
Losses paid	6,814.73
Losses incurred	9,176.51

HOME INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$6,000,000.00	<i>Expenditures</i>	
Assets	33,139,915.81	Losses	\$7,580,643.19
Liabilities, exclusive of capital and net surplus	17,066,896.12	Dividends	4,200,000.00
		Other expenditures	5,915,220.13
<i>Income</i>		Total expenditures, 1913	\$17,695,863.32
Premiums	\$14,652,097.22	<i>Fire Insurance Business, 1913</i>	
Other sources	4,464,888.38	Risks written	\$2,068,125,889.00
Total income, 1913	\$19,114,985.60	Premiums thereon	19,733,242.76
		Losses incurred	7,198,080.48

Nevada Business

Risks written	\$1,284,557.00
Premiums received	18,151.58
Losses paid	12,446.40
Losses incurred	18,141.61

INSURANCE COMPANY OF NORTH AMERICA
PHILADELPHIA, PENNSYLVANIA

Capital (paid up in cash)	\$4,000,000.00	<i>Expenditures</i>	
Assets	17,880,122.23	Losses	\$5,332,145.55
Liabilities, exclusive of capital and net surplus	9,880,122.23	Dividends	480,000.00
		Other expenditures	3,783,771.55
<i>Income</i>		Total expenditures, 1913	\$9,595,917.10
Premiums	\$9,394,123.48	<i>Fire Insurance Business, 1913</i>	
Other sources	702,777.01	Risks written	\$778,099,901.00
Total income, 1913	\$10,096,900.49	Premiums thereon	8,699,352.35
		Losses incurred	5,400,138.40

Nevada Business

Risks written	\$336,434.00
Premiums received	7,162.04
Losses paid	1,881.24
Losses incurred	1,867.59

INTERNATIONAL INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$200,000.00	<i>Expenditures</i>	
Assets	3,803,160.91	Losses	\$2,366,452.33
Liabilities, exclusive of capital and net surplus	2,971,068.06	Dividends	20,000.00
		Other expenditures	1,492,319.16
<i>Income</i>		Total expenditures, 1913	\$3,878,771.49
Premiums	\$3,700,739.89	<i>Fire Insurance Business, 1913</i>	
Other sources	225,567.55	Risks written	\$534,471,623.00
Total income, 1913	\$3,926,297.44	Premiums thereon	5,672,032.99
		Losses incurred	2,453,651.26

Nevada Business

Risks written	\$260,784.00
Premiums received	5,419.91
Losses paid	7,259.45
Losses incurred	7,819.37

INTERNATIONAL REASSURANCE COMPANY (Limited)
VIENNA, AUSTRIA

Capital (deposited)	\$255,000.00	<i>Expenditures</i>	
Assets	554,068.06	Losses	None
Liabilities, exclusive of capital and net surplus	102,888.91	Dividends	None
		Other expenditures	\$280.80
<i>Income</i>		Total expenditures, 1913	\$280.80
Premiums	\$33,900.59	<i>Fire Insurance Business, 1913</i>	
Other sources	767.86	Risks written	\$5,146,271.00
Total income, 1913	\$34,668.45	Premiums thereon	33,900.59
		Losses incurred	None

Nevada Business

Risks written	None
Premiums received	None
Losses paid	None
Losses incurred	None

REPORT OF INSURANCE COMMISSIONER

JAKOR INSURANCE COMPANY

MOSCOW, RUSSIA

Capital (deposited)	\$200,000.00		
Assets	2,615,069.11		
Liabilities, exclusive of capital and net surplus	1,914,125.75		
		<i>Income</i>	
Premiums	\$2,502,349.69		
Other sources	107,697.40		
Total income, 1913	\$2,610,047.09		
		<i>Expenditures</i>	
Losses		\$1,591,776.14	
Dividends		None	
Other expenses		894,728.75	
		Total expenditures, 1913	\$2,476,504.89
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$600,706,915.00
		Premiums thereon	6,459,797.46
		Losses incurred	1,594,909.28

Nevada Business

Risks written	\$187,996.00
Premiums received	3,563.67
Losses paid	5,330.32
Losses incurred	6,201.32

LAW UNION AND ROCK INSURANCE COMPANY

LONDON, ENGLAND

Capital (deposited)	\$338,000.00		
Assets	1,294,274.00		
Liabilities, exclusive of capital and net surplus	524,539.22		
		<i>Income</i>	
Premiums	\$451,257.72		
Other sources	469,562.78		
Total income, 1913	\$920,820.50		
		<i>Expenditures</i>	
Losses		\$269,708.62	
Dividends		None	
Other expenditures		656,631.18	
		Total expenditures, 1913	\$926,339.70
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$76,596,615.00
		Premiums thereon	762,279.73
		Losses incurred	257,232.38

Nevada Business

Risks written	\$269,896.00
Premiums received	7,300.45
Losses paid	1,192.79
Losses incurred	1,192.79

LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY (Limited)

LIVERPOOL, ENGLAND

Capital (deposited)	\$350,000.00		
Assets	14,263,846.96		
Liabilities, exclusive of capital and net surplus	9,632,630.05		
		<i>Income</i>	
Premiums	\$8,908,994.58		
Other sources	536,508.57		
Total income, 1913	\$9,445,503.15		
		<i>Expenditures</i>	
Losses		\$4,632,432.08	
Dividends		None	
Other expenditures		4,084,364.37	
		Total expenditures, 1913	\$8,716,796.45
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$1,503,201,050.00
		Premiums thereon	14,513,697.83
		Losses incurred	4,641,618.01

Nevada Business

Risks written	\$980,243.00
Premiums received	21,622.25
Losses paid	7,494.71
Losses incurred	7,494.71

LONDON AND LANCASHIRE FIRE INSURANCE COMPANY

LIVERPOOL, ENGLAND

Capital (deposited)	\$510,000.00		
Assets	5,038,002.77		
Liabilities, exclusive of capital and net surplus	3,208,074.57		
<i>Income</i>			
Premiums	\$2,627,718.18		
Other sources	178,298.27		
Total income, 1913	\$2,801,011.45		
		<i>Expenditures</i>	
		Losses	\$1,181,763.96
		Dividends	None
		Other expenditures	1,048,197.89
		Total expenditures, 1913	\$2,224,961.85
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$471,715,489.00
		Premiums thereon	4,815,549.24
		Losses incurred	1,118,568.95

Nevada Business

Risks written	\$489,745.00
Premiums received	7,631.85
Losses paid	5,468.67
Losses incurred	5,283.67

LONDON ASSURANCE CORPORATION

LONDON, ENGLAND

Capital (deposited)	\$665,000.00		
Assets	3,814,383.36		
Liabilities, exclusive of capital and net surplus	2,677,662.12		
<i>Income</i>			
Premiums	\$2,638,899.57		
Other sources	228,499.04		
Total income, 1913	\$2,867,398.61		
		<i>Expenditures</i>	
		Losses	\$1,328,191.55
		Dividends	None
		Other expenditures	1,496,200.55
		Total expenditures, 1913	\$2,824,392.10
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$305,327,019.00
		Premiums thereon	3,350,806.46
		Losses incurred	1,332,771.82

Nevada Business

Risks written	\$672,414.00
Premiums received	14,625.62
Losses paid	8,354.88
Losses incurred	8,744.88

LONDON UNDERWRITERS AGENCY OF THE LONDON ASSURANCE CORPORATION

LONDON, ENGLAND

Capital (paid up in cash)	\$665,000.00		
Assets	3,814,383.36		
Liabilities, exclusive of capital and net surplus	2,677,622.12		
<i>Income</i>			
Premiums	\$2,638,899.57		
Other sources	228,499.04		
Total income, 1913	\$2,867,398.61		
		<i>Expenditures</i>	
		Losses	\$1,328,191.55
		Dividends	None
		Other expenditures	1,496,200.55
		Total expenditures, 1913	\$2,824,392.10
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$305,327,019.00
		Premiums thereon	3,350,806.46
		Losses incurred	1,332,771.82

Nevada Business

Risks written	\$75,080.00
Premiums received	1,522.62
Losses paid	120.55
Losses incurred	120.55

REPORT OF INSURANCE COMMISSIONER
MANCHESTER ASSURANCE COMPANY
LONDON, ENGLAND

Capital (deposited)		Expenditures	
Assets	\$2,947,026.38	Losses	\$852,382.45
Liabilities, exclusive of capital and net surplus	1,869,763.23	Dividends	None
		Other expenditures	712,271.05
Income		Total expenditures, 1913	\$1,664,653.50
Premiums	\$1,752,361.21	Fire Insurance Business, 1913	
Other sources	103,209.32	Risks written	\$266,743,985.00
Total income, 1913	\$1,855,570.53	Premiums thereon	2,630,487.15
		Losses incurred	903,168.06

Nevada Business	
Risks written	\$59,050.00
Premiums received	1,052.52
Losses paid	168.09
Losses incurred	43.09

MICHIGAN FIRE AND MARINE INSURANCE COMPANY
DETROIT, MICHIGAN

Capital (paid up in cash)	\$400,000.00	Expenditures	
Assets	1,547,443.95	Losses	\$393,644.34
Liabilities, exclusive of capital and net surplus	763,258.71	Dividends	40,000.00
		Other expenditures	318,438.24
Income		Total expenditures, 1913	\$752,083.18
Premiums	\$702,401.89	Fire Insurance Business, 1913	
Other sources	136,509.71	Risks written	\$96,474,777.00
Total income, 1913	\$838,911.10	Premiums thereon	1,082,573.15
		Losses incurred	894,686.36

Nevada Business	
Risks written	\$117,143.00
Premiums received	2,817.33
Losses paid	847.21
Losses incurred	1,127.21

MOSCOW FIRE INSURANCE COMPANY
MOSCOW, RUSSIA

Capital (deposited)	\$220,000.00	Expenditures	
Assets	1,945,834.25	Losses	\$329,660.34
Liabilities, exclusive of capital and net surplus	1,406,352.85	Dividends	None
		Other expenditures	142,954.55
Income		Total expenditures, 1913	\$1,702,615.19
Premiums	\$1,612,173.60	Fire Insurance Business, 1913	
Other sources	78,953.32	Risks written	\$227,030,818.00
Total income, 1913	\$1,691,126.92	Premiums thereon	2,125,059.27
		Losses incurred	967,918.34

Nevada Business	
Risks written	\$142,330.00
Premiums received	4,209.16
Losses paid	1,658.00
Losses incurred	1,658.00

MUNICH REINSURANCE COMPANY

MUNICH, GERMANY

Capital (deposited)	\$305,000.00	<i>Expenditures</i>	
Assets	6,417,941.68	Losses	\$3,650,890.32
Liabilities, exclusive of capital and net surplus	4,964,615.15	Dividends	None
		Other expenditures	2,009,000.78
		Total expenditures, 1913	\$5,659,891.10
<i>Income</i>		<i>Fire Insurance Business, 1913</i>	
Premiums	\$5,698,478.64	Risks written	\$691,038,361.00
Other sources	298,060.47	Premiums thereon	7,269,680.35
Total income, 1913	\$5,996,539.11	Losses incurred	3,551,910.32

Nevada Business

Risks written	\$424,718.00
Premiums received	9,822.49
Losses paid	7,511.90
Losses incurred	8,011.90

NATIONAL FIRE INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	15,485,761.53	Losses	\$4,355,210.92
Liabilities, exclusive of capital and net surplus	9,403,320.65	Dividends	400,000.00
		Other expenditures	3,555,981.07
		Total expenditures, 1913	\$8,311,191.99
<i>Income</i>		<i>Fire Insurance Business, 1913</i>	
Premiums	\$8,454,040.69	Risks written	\$1,381,715,512.00
Other sources	676,314.00	Premiums thereon	13,382,518.64
Total income, 1913	\$9,130,354.69	Losses incurred	4,381,436.65

Nevada Business

Risks written	\$443,178.00
Premiums received	8,359.03
Losses paid	1,747.15
Losses incurred	1,993.65

NEW YORK UNDERWRITERS AGENCY HARTFORD FIRE
INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	26,625,973.85	Losses	\$8,812,707.68
Liabilities, exclusive of capital and net surplus	16,977,451.72	Dividends	800,000.00
		Other expenditures	6,840,154.10
		Total expenditures, 1913	\$16,452,861.78
<i>Income</i>		<i>Fire Insurance Business, 1913</i>	
Premiums	\$16,454,395.02	Risks written	\$2,034,164,688.00
Other sources	1,078,501.66	Premiums thereon	21,313,778.90
Total income, 1913	\$17,532,896.68	Losses incurred	8,791,311.23

Nevada Business

Risks written	\$462,254.00
Premiums received	8,598.46
Losses paid	513.88
Losses incurred	948.09

REPORT OF INSURANCE COMMISSIONER

NEWARK FIRE INSURANCE COMPANY

NEWARK, NEW JERSEY

Capital (paid up in cash)	\$500,000.00	Losses	<i>Expenditures</i>	
Assets	2,009,892.77	Dividends		\$409,553.60
Liabilities, exclusive of capital and net surplus	901,859.21	Other expenditures		69,746.50
				405,812.50
		Total expenditures, 1913		\$885,112.60
				<i>Fire Insurance Business, 1913</i>
<i>Income</i>		Risks written		\$126,376,804.00
Premiums	\$921,681.13	Premiums thereon		1,374,294.11
Other sources	75,115.09	Losses incurred		445,850.15
Total income, 1913	\$996,796.22			

Nevada Business

Risks written	\$64,650.00
Premiums received	1,680.89
Losses paid	2,500.97
Losses incurred	2,680.58

NEW ZEALAND INSURANCE COMPANY (Limited)

AUCKLAND, NEW ZEALAND

Capital (deposited)	\$200,000.00	Losses	<i>Expenditures</i>	
Assets	818,176.15	Dividends		\$215,125.36
Liabilities, exclusive of capital and net surplus	457,521.63	Other expenditures		None
				307,967.65
		Total expenditures, 1913		\$523,093.01
				<i>Fire Insurance Business, 1913</i>
<i>Income</i>		Risks written		\$42,689,443.00
Premiums	\$503,897.08	Premiums thereon		663,271.25
Other sources	81,926.25	Losses incurred		224,929.26
Total income, 1913	\$585,823.28			

Nevada Business

Risks written	\$315,618.00
Premiums received	5,853.01
Losses paid	2,038.55
Losses incurred	2,038.55

NIAGARA FIRE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$1,000,000.00	Losses	<i>Expenditures</i>	
Assets	6,916,921.81	Dividends		\$1,655,731.25
Liabilities, exclusive of capital and net surplus	3,413,509.98	Other expenditures		250,000.00
				1,319,729.64
		Total expenditures, 1913		\$3,225,460.00
				<i>Fire Insurance Business, 1913</i>
<i>Income</i>		Risks written		\$443,043,075.00
Premiums	\$3,241,840.71	Premiums thereon		4,785,203.75
Other sources	301,018.20	Losses incurred		1,654,493.60
Total income, 1913	\$3,542,859.91			

Nevada Business

Risks written	\$865,468.00
Premiums received	12,628.68
Losses paid	6,852.41
Losses incurred	5,806.41

NORTHERN ASSURANCE COMPANY (Limited)
LONDON, ENGLAND

Capital (deposited)	\$300,000.00		
Assets	5,187,850.44		
Liabilities, exclusive of capital and net surplus	3,042,096.07		
<i>Income</i>			
Premiums	\$2,730,792.91		
Other sources	407,883.20		
Total income, 1913	\$3,138,676.11		
		<i>Expenditures</i>	
		Losses	\$1,490,165.44
		Dividends	None
		Other expenditures	1,649,846.28
		Total expenditures, 1913	\$3,140,011.72
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$454,755,913.00
		Premiums thereon	4,617,402.86
		Losses incurred	1,413,090.93

Nevada Business

Risks written	\$201,018.00
Premiums received	5,480.69
Losses paid	6,476.26
Losses incurred	4,976.26

NORTHERN INSURANCE COMPANY
MOSCOW, RUSSIA

Capital (deposited)	\$300,000.00		
Assets	1,022,298.13		
Liabilities, exclusive of capital and net surplus	584,095.04		
<i>Income</i>			
Premiums	\$821,148.02		
Other sources	32,844.53		
Total income, 1913	\$853,992.55		
		<i>Expenditures</i>	
		Losses	\$382,871.65
		Dividends	None
		Other expenditures	240,449.51
		Total expenditures, 1913	\$603,321.16
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$102,012,887.00
		Premiums thereon	1,004,862.42
		Losses incurred	396,932.15

Nevada Business

Risks written	\$51,612.00
Premiums received	1,076.27
Losses paid	762.93
Losses incurred	762.93

NORTH BRITISH AND MERCANTILE INSURANCE COMPANY
LONDON AND EDINBURGH, GREAT BRITAIN

Capital (deposited)	\$330,000.00		
Assets	8,787,206.47		
Liabilities, exclusive of capital and net surplus	5,406,990.55		
<i>Income</i>			
Premiums	\$5,167,622.21		
Other sources	333,838.49		
Total income, 1913	\$5,501,460.70		
		<i>Expenditures</i>	
		Losses	\$2,531,916.88
		Dividends	None
		Other expenditures	2,183,693.56
		Total expenditures, 1913	\$4,715,610.44
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$869,858,445.00
		Premiums thereon	7,769,965.06
		Losses incurred	2,549,356.77

Nevada Business

Risks written	\$395,921.00
Premiums received	11,046.13
Losses paid	3,599.81
Losses incurred	5,124.81

REPORT OF INSURANCE COMMISSIONER

NORWICH UNION FIRE INSURANCE SOCIETY (Limited)

LONDON, ENGLAND

Capital (deposited)		<i>Expenditures</i>	
Assets	\$3,013,722.69	Losses	\$309,553.92
Liabilities, exclusive of capital and net surplus	1,836,840.20	Dividends	None
		Other expenditures	858,837.56
<i>Income</i>		Total expenditures, 1913	\$1,768,391.48
Premiums	\$1,713,745.06	<i>Fire Insurance Business, 1913</i>	
Other sources	378,035.23	Risks written	\$270,852,405.00
Total income, 1913	\$2,091,781.29	Premiums thereon	2,812,309.11
		Losses incurred	919,366.90

Nevada Business

Risks written	\$234,689.00
Premiums received	5,976.93
Losses paid	6,255.27
Losses incurred	6,263.94

ORIENT INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$1,000,000.00	<i>Expenditures</i>	
Assets	3,576,728.69	Losses	\$324,367.83
Liabilities, exclusive of capital and net surplus	1,715,250.96	Dividends	None
		Other expenditures	615,271.05
<i>Income</i>		Total expenditures, 1913	\$1,439,638.88
Premiums	\$1,502,441.42	<i>Fire Insurance Business, 1913</i>	
Other sources	142,922.00	Risks written	\$223,453,006.00
Total income, 1913	\$1,645,363.42	Premiums thereon	2,812,894.00
		Losses incurred	757,614.50

Nevada Business

Risks written	\$162,792.00
Premiums received	2,932.52
Losses paid	1,724.86
Losses incurred	1,744.86

PALATINE INSURANCE COMPANY (Limited)

LONDON, ENGLAND

Capital (deposited)	\$218,000.00	<i>Expenditures</i>	
Assets	3,199,623.08	Losses	\$360,846.80
Liabilities, exclusive of capital and net surplus	1,992,400.52	Dividends	None
		Other expenditures	912,772.29
<i>Income</i>		Total expenditures, 1913	\$1,873,619.09
Premiums	\$1,767,860.71	<i>Fire Insurance Business, 1913</i>	
Other sources	130,542.64	Risks written	\$257,752,073.00
Total income, 1913	\$1,898,403.35	Premiums thereon	2,879,800.63
		Losses incurred	978,482.12

Nevada Business

Risks written	\$130,506.00
Premiums received	2,794.47
Losses paid	31.25
Losses incurred	31.25

PATERNELLE INSURANCE COMPANY
PARIS, FRANCE

Capital(deposited).....	\$300,000.00	<i>Expenditures</i>	
Assets.....	924,436.67	Losses.....	None
Liabilities, exclusive of capital and net surplus.....	639,087.76	Dividends.....	None
		Other expenditures.....	\$225,400.80
<i>Income</i>		Total expenditures, 1913.....	\$225,400.80
Premiums.....	\$638,087.76	<i>Fire Insurance Business, 1913</i>	
Other sources.....	603,665.66	Risks written.....	\$115,340,342.00
Total income, 1913.....	\$1,141,753.32	Premiums thereon.....	1,230,158.06
		Losses incurred.....	None

Nevada Business

Risks written.....	\$75,198.00
Premiums received.....	1,425.47
Losses paid.....	None
Losses incurred.....	None

PENNSYLVANIA FIRE INSURANCE COMPANY

PHILADELPHIA, PENNSYLVANIA

Capital (paid up in cash).....	\$750,000.00	<i>Expenditures</i>	
Assets.....	8,002,962.21	Losses.....	\$1,917,771.19
Liabilities, exclusive of capital and net surplus.....	4,926,908.82	Dividends.....	225,000.00
		Other expenditures.....	1,356,857.53
<i>Income</i>		Total expenditures, 1913.....	\$3,499,128.72
Premiums.....	\$3,507,036.97	<i>Fire Insurance Business, 1913</i>	
Other sources.....	507,066.96	Risks written.....	\$485,085,712.00
Total income, 1913.....	\$4,014,103.93	Premiums thereon.....	4,814,811.34
		Losses incurred.....	1,940,173.37

Nevada Business

Risks written.....	\$479,166.00
Premiums received.....	8,168.50
Losses paid.....	3,871.78
Losses incurred.....	3,977.17

PHILADELPHIA UNDERWRITERS AGENCY OF THE FIRE
ASSOCIATION AND INSURANCE COMPANY
OF NORTH AMERICA
PHILADELPHIA, PENNSYLVANIA

Nevada Business

Risks written.....	\$198,424.00
Premiums received.....	4,537.40
Losses paid.....	3,674.62
Losses incurred.....	3,674.62

REPORT OF INSURANCE COMMISSIONER

PHOENIX FIRE INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$3,000,000.00		
Assets	14,568,065.88		
Liabilities, exclusive of capital and net surplus	6,407,140.50		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$5,799,627.74	Losses	\$2,562,208.04
Other sources	571,789.08	Dividends	240,000.00
Total income, 1913	\$6,371,416.77	Other expenditures	2,498,112.60
		Total expenditures, 1913	\$5,400,320.64
			<i>Fire Insurance Business, 1913</i>
		Risks written	\$896,401,507.00
		Premiums thereon	8,241,155.31
		Losses incurred	2,665,209.46

Nevada Business

Risks written	\$296,359.00
Premiums received	6,092.57
Losses paid	4,424.06
Losses incurred	5,424.75

PHOENIX ASSURANCE COMPANY (Limited)

LONDON, ENGLAND

Capital (deposited)	\$200,000.00		
Assets	3,890,965.79		
Liabilities, exclusive of capital and net surplus	2,402,492.29		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$2,418,820.86	Losses	\$1,244,338.80
Other sources	156,116.80	Dividends	None
Total income, 1913	\$2,574,937.16	Other expenditures	1,292,824.31
		Total expenditures, 1913	\$2,537,163.11
			<i>Fire Insurance Business, 1913</i>
		Risks written	\$432,887,937.00
		Premiums thereon	4,004,828.95
		Losses incurred	1,237,071.50

Nevada Business

Risks written	\$438,112.00
Premiums received	9,291.20
Losses paid	5,538.64
Losses incurred	3,814.08

PROVIDENCE WASHINGTON INSURANCE COMPANY

PROVIDENCE, RHODE ISLAND

Capital (paid up in cash)	\$1,000,000.00		
Assets	4,928,902.09		
Liabilities, exclusive of capital and net surplus	2,918,864.54		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$3,523,727.43	Losses	\$2,062,210.48
Other sources	199,561.21	Dividends	100,000.00
Total income, 1913	\$3,723,288.64	Other expenditures	1,279,867.04
		Total expenditures, 1913	\$3,442,077.52
			<i>Fire Insurance Business, 1913</i>
		Risks written	\$379,128,729.00
		Premiums thereon	3,882,890.60
		Losses incurred	1,371,501.44

Nevada Business

Risks written	\$81,750.00
Premiums received	2,088.80
Losses paid	9.72
Losses incurred	9.72

QUEEN INSURANCE COMPANY OF AMERICA

NEW YORK CITY, NEW YORK

Capital (paid up in cash).....	\$1,000,000.00		
Assets.....	9,980,013.15		
Liabilities, exclusive of capital and net surplus.....	5,041,004.66		
		<i>Income</i>	
Premiums.....	\$4,968,750.41		
Other sources.....	376,690.30		
Total income, 1913.....	\$5,345,440.71		
		<i>Expenditures</i>	
		Losses.....	\$2,658,320.44
		Dividends.....	300,000.00
		Other expenditures.....	1,978,762.98
		Total expenditures, 1913.....	\$4,937,083.42
		<i>Fire Insurance Business, 1913</i>	
		Risks written.....	\$547,349,053.00
		Premiums thereon.....	6,125,214.65
		Losses incurred.....	

Nevada Business

Risks written.....	\$763,169.00
Premiums received.....	18,974.60
Losses paid.....	9,088.81
Losses incurred.....	12,138.81

ROSSIA INSURANCE COMPANY

ST. PETERSBURG, RUSSIA

Capital (deposited).....	\$200,000.00		
Assets.....	6,168,186.02		
Liabilities, exclusive of capital and net surplus.....	5,265,091.26		
		<i>Income</i>	
Premiums.....	\$6,720,641.35		
Other sources.....	663,670.78		
Total income, 1913.....	\$7,384,312.13		
		<i>Expenditures</i>	
		Losses.....	\$4,043,308.75
		Dividends.....	None
		Other expenditures.....	\$2,574,762.74
		Total expenditures, 1913.....	\$6,618,165.49
		<i>Fire Insurance Business, 1913</i>	
		Risks written.....	\$711,281,318.00
		Premiums thereon.....	7,429,520.62
		Losses incurred.....	

Nevada Business

Risks written.....	\$414,560.00
Premiums received.....	7,504.13
Losses paid.....	6,018.59
Losses incurred.....	6,041.59

ROYAL INSURANCE COMPANY (Limited)

LIVERPOOL, ENGLAND

Capital (deposited).....	\$550,000.00		
Assets.....	12,599,308.24		
Liabilities, exclusive of capital and net surplus.....	9,302,120.35		
		<i>Income</i>	
Premiums.....	\$8,235,945.92		
Other sources.....	1,506,426.31		
Total income, 1913.....	\$9,742,372.23		
		<i>Expenditures</i>	
		Losses.....	\$4,317,627.63
		Dividends.....	None
		Other expenditures.....	4,806,840.29
		Total expenditures, 1913.....	\$9,123,467.92
		<i>Fire Insurance Business, 1913</i>	
		Risks written.....	\$1,105,386,170.00
		Premiums thereon.....	11,311,532.06
		Losses incurred.....	4,232,887.91

Nevada Business

Risks written.....	\$1,079,489.00
Premiums received.....	26,955.88
Losses paid.....	13,135.71
Losses incurred.....	14,685.71

REPORT OF INSURANCE COMMISSIONER

RUSSIAN REINSURANCE COMPANY

ST. PETERSBURG, RUSSIA

Capital (deposited)	\$223,000.00		
Assets	1,500,087.60		
Liabilities, exclusive of capital and net surplus	968,806.48		
		<i>Income</i>	
Premiums	\$1,108,952.89		
Other sources	56,134.96		
Total income, 1913	\$1,160,087.84		
		<i>Expenditures</i>	
		Losses	\$618,869.87
		Dividends	None
		Other expenditures	410,977.45
		Total expenditures, 1913	\$1,029,847.32
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$152,528,694.00
		Premiums thereon	1,465,008.77
		Losses incurred	

Nevada Business

Risks written	\$161,638.00
Premiums received	3,784.02
Losses paid	2,526.52
Losses incurred	2,546.32

SALAMANDRA INSURANCE COMPANY

ST. PETERSBURG, RUSSIA

Capital (deposited)	\$300,000.00		
Assets	2,461,804.48		
Liabilities, exclusive of capital and net surplus	1,873,719.41		
		<i>Income</i>	
Premiums	\$2,364,997.85		
Other sources	96,083.00		
Total income, 1913	\$2,461,080.85		
		<i>Expenditures</i>	
		Losses	\$1,681,906.39
		Dividends	23,470.41
		Other expenditures	287,300.73
		Total expenditures, 1913	\$2,692,677.53
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$398,717,538.00
		Premiums thereon	9,385,703.49
		Losses incurred	1,552,143.48

Nevada Business

Risks written	\$187,996.00
Premiums received	3,663.67
Losses paid	5,380.53
Losses incurred	6,043.83

ST. PAUL FIRE AND MARINE INSURANCE COMPANY

ST. PAUL, MINNESOTA

Capital (paid up in cash)	\$500,000.00		
Assets	9,464,889.73		
Liabilities, exclusive of capital and net surplus	5,750,923.88		
		<i>Income</i>	
Premiums	\$6,109,854.65		
Other sources	412,570.16		
Total income, 1913	\$6,522,424.80		
		<i>Expenditures</i>	
		Losses	\$3,306,440.18
		Dividends	100,000.00
		Other expenditures	2,221,826.95
		Total expenditures, 1913	\$5,628,267.13
		<i>Fire Insurance Business, 1913</i>	
		Risks written	\$502,973,510.00
		Premiums thereon	6,135,019.73
		Losses incurred	2,381,369.17

Nevada Business

Risks written	\$144,490.00
Premiums received	3,039.53
Losses paid	6,041.87
Losses incurred	6,041.87

SCOTTISH UNION AND NATIONAL FIRE INSURANCE COMPANY
EDINBURGH, SCOTLAND

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	5,954,448.26	Losses	\$1,063,913.72
Liabilities, exclusive of capital and net surplus	2,532,223.14	Dividends	None
		Other expenditures	994,423.84
<i>Income</i>		Total expenditures, 1913	\$2,068,337.56
Premiums	\$2,265,293.04	<i>Fire Insurance Business, 1913</i>	
Other sources	326,579.42	Risks written	\$442,942,806.00
Total income, 1913	\$2,591,872.46	Premiums thereon	4,119,024.59
		Losses incurred	1,080,112.92

Nevada Business

Risks written	\$277,972.00
Premiums received	6,892.47
Losses paid	5,781.97
Losses incurred	7,211.97

SKANDIA INSURANCE COMPANY

STOCKHOLM, SWEDEN

Capital (deposited)	\$380,000.00	<i>Expenditures</i>	
Assets	1,496,826.61	Losses	\$714,874.98
Liabilities, exclusive of capital and net surplus	1,164,245.68	Dividends	None
		Other expenditures	499,389.30
<i>Income</i>		Total expenditures, 1913	\$1,214,264.28
Premiums	\$1,201,562.76	<i>Fire Insurance Business, 1913</i>	
Other sources	56,097.52	Risks written	\$147,090,505.00
Total income, 1913	\$1,257,660.28	Premiums thereon	1,598,864.19
		Losses incurred	695,308.88

Nevada Business

Risks written	\$173,275.00
Premiums received	4,278.39
Losses paid	2,534.33
Losses incurred	2,534.33

SOUTH GERMAN REINSURANCE COMPANY

MUNICH, BAVARIA

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	1,030,850.34	Losses	\$314,045.97
Liabilities, exclusive of capital and net surplus	513,181.97	Dividends	None
		Other expenditures	289,587.76
<i>Income</i>		Total expenditures, 1913	\$553,633.72
Premiums	\$611,665.62	<i>Fire Insurance Business, 1913</i>	
Other sources	43,255.69	Risks written	\$72,318,710.00
Total income, 1913	\$654,921.31	Premiums thereon	770,964.97
		Losses incurred	341,487.54

Nevada Business

Risks written	\$46,687.00
Premiums received	686.33
Losses paid	1,746.75
Losses incurred	1,746.75

SPRINGFIELD FIRE AND MARINE INSURANCE COMPANY

SPRINGFIELD, MASSACHUSETTS

Capital (paid up in cash)	\$2,500,000.00	Losses	<i>Expenditures</i>	
Assets	10,943,902.88	Dividends		\$2,992,851.40
Liabilities, exclusive of capital and net surplus	6,112,529.02	Other expenditures		200,000.00
				2,854,707.41
		Total expenditures, 1913		\$6,047,558.81
			<i>Fire Insurance Business, 1913</i>	
<i>Income</i>		Risks written		\$747,307,942.00
Premiums	\$5,743,117.84	Premiums thereon		8,729,448.15
Other sources	475,649.20	Losses incurred		3,006,642.25
Total income, 1913	\$6,218,767.04			

Nevada Business

Risks written	\$606,525.28
Premiums received	17,406.85
Losses paid	16,547.60
Losses incurred	17,306.04

SUN INSURANCE OFFICE

LONDON, ENGLAND

Capital (deposited)	\$300,000.00	Losses	<i>Expenditures</i>	
Assets	4,866,148.41	Dividends		\$1,516,054.36
Liabilities, exclusive of capital and net surplus	3,370,838.18	Other expenditures		None
				1,255,844.98
		Total expenditures, 1913		\$2,771,899.34
			<i>Fire Insurance Business, 1913</i>	
<i>Income</i>		Risks written		\$415,382,347.00
Premiums	\$2,766,874.45	Premiums thereon		4,483,891.84
Other sources	350,453.49	Losses incurred		1,508,017.14
Total income, 1913	\$3,117,327.94			

Nevada Business

Risks written	\$398,737.00
Premiums received	10,337.59
Losses paid	1,165.36
Losses incurred	1,165.36

SVEA FIRE AND LIFE INSURANCE COMPANY (Limited)

GOTHENBURG, SWEDEN

Capital (deposited)	\$310,000.00	Losses	<i>Expenditures</i>	
Assets	1,518,749.80	Dividends		\$391,753.34
Liabilities, exclusive of capital and net surplus	847,475.65	Other expenditures		350,756.00
		Total expenditures, 1913		\$742,509.34
			<i>Fire Insurance Business, 1913</i>	
<i>Income</i>		Risks written		\$103,394,224.00
Premiums	\$827,797.11	Premiums thereon		1,204,636.96
Other sources	73,298.42	Losses incurred		853,781.04
Total income, 1913	\$901,095.53			

Nevada Business

Risks written	\$224,057.00
Premiums received	5,592.36
Losses paid	1,399.03
Losses incurred	1,711.49

SWISS NATIONAL INSURANCE COMPANY (Limited)

BASLE, SWITZERLAND

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	1,436,559.58	Losses	\$693,471.20
Liabilities, exclusive of capital and net surplus	1,066,026.91	Dividends	None
		Other expenditures	502,600.23
<i>Income</i>		Total expenditures, 1913	\$1,196,071.43
Premiums	\$1,390,415.82	<i>Fire Insurance Business, 1913</i>	
Other sources	59,654.35	Risks written	\$177,805,209.00
Total income, 1913	\$1,440,070.17	Premiums thereon	1,752,112.66
		Losses incurred	743,425.20

Nevada Business

Risks written	\$198,235.00
Premiums received	8,841.10
Losses paid	79.64
Losses incurred	129.64

SWISS REINSURANCE COMPANY

ZURICH, SWITZERLAND

Capital (deposited)	\$300,000.00	<i>Expenditures</i>	
Assets	986,118.58	Losses	\$415,937.59
Liabilities, exclusive of capital and net surplus	659,989.44	Dividends	None
		Other expenditures	422,240.29
<i>Income</i>		Total expenditures, 1913	\$838,177.88
Premiums	\$769,667.09	<i>Fire Insurance Business, 1913</i>	
Other sources	182,073.24	Risks written	\$96,823,068.00
Total income, 1913	\$951,740.33	Premiums thereon	968,438.44
		Losses incurred	None given

Nevada Business

Risks written	\$85,195.00
Premiums received	1,899.20
Losses paid	1,073.11
Losses incurred	73.11

UNION ASSURANCE SOCIETY (Limited)

LONDON, ENGLAND

Capital (deposited)	\$200,000.00	<i>Expenditures</i>	
Assets	1,337,729.68	Losses	\$159,482.61
Liabilities, exclusive of capital and net surplus	401,189.58	Dividends	None
		Other expenditures	214,521.20
<i>Income</i>		Total expenditures, 1913	\$374,003.81
Premiums	\$390,114.79	<i>Fire Insurance Business, 1913</i>	
Other sources	403,070.42	Risks written	\$64,428,631.00
Total income, 1913	793,185.21	Premiums thereon	722,940.98
		Losses incurred	158,365.60

Nevada Business

Risks written	None
Premiums received	\$4,122.59
Losses paid	4,833.44
Losses incurred	4,837.44

REPORT OF INSURANCE COMMISSIONER

UNION AND PHENIX ESPANOL INSURANCE COMPANY

MADRID, SPAIN

Capital (deposited)	\$300,000.00	Losses	<i>Expenditures</i>	
Assets	1,287,568.99	Dividends		\$806,492.47
Liabilities, exclusive of capital and net surplus	981,971.45	Other expenditures		None
				886,107.20
<i>Income</i>		Total expenditures, 1913		\$992,599.67
Premiums	\$1,185,352.25		<i>Fire Insurance Business, 1913</i>	
Other sources	44,697.60	Risks written		\$133,891,415.00
Total income, 1913	\$1,210,049.85	Premiums thereon		1,439,691.15
		Losses incurred		649,754.36

Nevada Business

Risks written	\$213,902.00
Premiums received	4,788.06
Losses paid	2,429.27
Losses incurred	3,929.27

WARSAW FIRE INSURANCE COMPANY

WARSAW, RUSSIA

Capital (paid up in cash)	\$300,000.00	Losses	<i>Expenditures</i>	
Assets	970,427.93	Dividends		\$346,496.07
Liabilities, exclusive of capital and net surplus	692,837.49	Other expenditures		None
				212,951.55
<i>Income</i>		Total expenditures, 1913		\$569,447.62
Premiums	\$669,691.33		<i>Fire Insurance Business, 1913</i>	
Other sources	36,404.27	Risks written		\$65,476,533.00
Total income, 1913	\$706,095.60	Premiums thereon		770,143.03
		Losses incurred		372,926.68

Nevada Business

Risks written	\$54,967.00
Premiums received	1,171.82
Losses paid	762.93
Losses incurred	772.29

WESTCHESTER FIRE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$300,000.00	Losses	<i>Expenditures</i>	
Assets	5,218,653.81	Dividends		\$1,880,901.73
Liabilities, exclusive of capital and net surplus	3,639,882.08	Other expenditures		1,367,792.38
<i>Income</i>		Total expenditures, 1913		\$3,368,694.66
Premiums	\$3,231,510.88		<i>Fire Insurance Business, 1913</i>	
Other sources	225,211.44	Risks written		\$510,826,970.00
Total income, 1913	\$3,456,722.32	Premiums thereon		5,320,486.39
		Losses incurred		1,841,736.92

Nevada Business

Risks written	\$120,160.00
Premiums received	2,906.47
Losses paid	44.47
Losses incurred	219.47

WESTERN ASSURANCE COMPANY

TORONTO, CANADA

Capital(deposited)	\$212,000.00			<i>Expenditures</i>	
Assets	2,616,181.46			Losses	\$911,123.15
Liabilities, exclusive of capital and net surplus	1,561,292.79			Dividends	None
				Other expenditures	805,205.45
				Total expenditures, 1913	\$1,716,328.60
					<i>Fire Insurance Business, 1913</i>
<i>Income</i>				Risks written	\$242,814,150.00
Premiums	\$1,536,647.37			Premiums thereon	2,296,510.19
Other sources	312,616.76			Losses incurred	691,142.23
Total income, 1913	\$1,849,264.13				

Nevada Business

Risks written	\$163,151.00
Premiums received	2,662.47
Losses paid	839.70
Losses incurred	

SUMMARY OF NEVADA'S FIRE INSURANCE BUSINESS FOR 1913

Amount of risks written	\$22,880,922.78
Premiums received	500,354.14
Losses paid	282,115.01
Losses incurred	305,157.91

LIFE AND ACCIDENT INSURANCE COMPANIES

AMICABLE LIFE INSURANCE COMPANY

WACO, TEXAS

Capital (paid up in cash)	\$820,000.00	<i>Expenditures</i>	
Assets	1,967,740.67		
Liabilities, exclusive of capital and net surplus	495,941.53	Paid policy holders	\$82,064.97
<i>Income</i>		Dividends	None
Premiums	\$565,028.00	Other expenditures	431,970.51
Other sources	168,460.49	Total expenditures, 1913	\$514,035.48
Total income, 1913	\$733,478.49		

Nevada Business
None.

BANKERS RESERVE LIFE COMPANY

OMAHA, NEBRASKA

Capital (paid up in cash)	\$100,000.00	<i>Expenditures</i>	
Assets	4,292,750.02		
Liabilities, exclusive of capital and net surplus	3,590,350.92	Paid policy holders	\$418,083.78
<i>Income</i>		Dividends	10,000.00
Premiums	\$1,180,270.53	Other expenditures	558,198.75
Other sources	199,127.93	Total expenditures, 1913	\$786,282.53
Total income, 1913	\$1,379,398.46		

Nevada Business

Number of risks written	2
Amount of risks written	\$4,243.00
Premiums received	\$555.64
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	6
Amount of said policies	\$23,239.00

BENEFICIAL LIFE INSURANCE COMPANY

SALT LAKE CITY, UTAH

Capital (paid up in cash)	\$200,000.00	<i>Expenditures</i>	
Assets	951,969.98		
Liabilities, exclusive of capital and net surplus	524,874.44	Paid policy holders	\$51,773.74
<i>Income</i>		Dividends	20,000.00
Premiums	\$322,740.39	Other expenditures	143,533.96
Other sources	54,600.06	Total expenditures, 1913	\$215,307.70
Total income, 1913	\$337,340.44		

Nevada Business

Number of risks written	12
Amount of risks written	\$11,500.00
Premiums received	\$2,955.85
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	60
Amount of said policies	\$72,000.00

CALIFORNIA STATE LIFE INSURANCE COMPANY
SACRAMENTO, CALIFORNIA

Capital (paid up in cash)	\$500,000.00		
Assets	976,639.53		
Liabilities, exclusive of capital and net surplus	230,577.44		
		<i>Expenditures</i>	
		Paid policy holders	\$67,768.47
		Dividends	None
		Other expenditures	210,390.81
		Total expenditures, 1913	\$278,159.28
<i>Income</i>			
Premiums	\$398,554.85		
Other sources	41,791.96		
Total income, 1913	\$428,346.81		

Nevada Business

Number of risks written	30
Amount of risks written	\$125,000.00
Premiums received	\$17,890.15
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	85
Amount of said policies	\$383,500.00

CAPITOL LIFE INSURANCE COMPANY
DENVER, COLORADO

Capital (paid up in in cash)	\$100,000.00		
Assets	1,302,671.42		
Liabilities, exclusive of capital and net surplus	1,085,324.80		
		<i>Expenditures</i>	
		Paid policy holders	\$188,221.26
		Dividends	None
		Other expenditures	256,841.89
		Total expenditures, 1913	\$445,063.15
<i>Income</i>			
Premiums	\$515,338.69		
Other sources	92,147.76		
Total income, 1913	\$607,486.44		

Nevada Business

Number of risks written	None
Amount of risks written	None
Premiums received	\$1,363.57
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	13
Amount of said policies	\$31,636.00

COLUMBIAN NATIONAL LIFE INSURANCE COMPANY
BOSTON, MASSACHUSETTS

Capital (paid up in cash)	\$1,000,000.00		
Assets	9,214,460.76		
Liabilities, exclusive of capital and net surplus	7,762,667.26		
		<i>Expenditures</i>	
		Paid policy holders	\$692,883.02
		Dividends	70,000.00
		Other expenditures	1,012,094.26
		Total expenditures, 1913	\$1,774,977.28
<i>Income</i>			
Premiums	\$2,055,474.52		
Other sources	685,066.56		
Total income, 1913	\$2,720,541.08		

Nevada Business

Number of risks written	76
Amount of risks written	\$126,665.00
Premiums received	\$9,784.36
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	133
Amount of said policies	\$279,856.00

CONTINENTAL LIFE INSURANCE AND INVESTMENT COMPANY

SALT LAKE CITY, UTAH

Capital (paid up in cash)	\$208,875.00		
Assets	1,168,945.16		
Liabilities, exclusive of capital and net surplus	888,946.80	<i>Expenditures</i>	
		Paid policy holders	\$108,127.75
		Dividends	14,621.25
		Other expenditures	206,523.19
		Total expenditures, 1913	\$329,272.19
<i>Income</i>			
Premiums	\$376,635.93		
Other sources	78,180.51		
Total income, 1913	\$454,816.44		

Nevada Business

Number of risks written	96
Amount of risks written	\$210,000.00
Premiums received	\$10,127.21
Losses paid	\$2,310.35
Losses incurred	\$2,310.35
Number of policies in force December 31, 1913	145
Amount of said policies	\$347,743.50

EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$100,000.00		
Assets	525,345,619.06		
Liabilities, exclusive of capital and net surplus	515,440,818.00	<i>Expenditures</i>	
		Paid policy holders	\$54,805,924.84
		Dividends	7,000.00
		Other expenditures	11,945,594.75
		Total expenditures, 1913	\$66,758,519.59
<i>Income</i>			
Premiums	\$7,249,154.33		
Other sources	71,823,329.79		
Total income, 1913	\$79,072,484.12		

Nevada Business

Number of risks written	92
Amount of risks written	\$281,345.00
Premiums received	\$44,342.07
Losses paid	\$2,000.00
Losses incurred	Not given
Number of policies in force December 31, 1913	568
Amount of said policies	\$1,400,928.00

HOME LIFE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$125,000.00		
Assets	29,181,999.11		
Liabilities, exclusive of capital and net surplus	27,077,057.64	<i>Expenditures</i>	
		Paid policy holders	\$2,940,308.15
		Dividends	15,000.00
		Other expenditures	1,068,317.82
		Total expenditures, 1913	\$4,023,626.97
<i>Income</i>			
Premiums	\$4,088,092.41		
Other sources	1,399,035.29		
Total income, 1913	\$5,487,127.70		

Nevada Business

Number of risks written	None
Amount of risks written	None
Premiums received	\$4,946.04
Losses paid	\$2,583.96
Losses incurred	\$2,583.96
Number of policies in force December 31, 1913	78
Amount of said policies	\$131,988.00

KANSAS CITY LIFE INSURANCE COMPANY

KANSAS CITY, MISSOURI

Capital (paid up in cash)	\$100,000.00		
Assets	3,944,206.57		
Liabilities, exclusive of capital and net surplus	3,617,476.34		
		<i>Expenditures</i>	
		Paid policy holders	\$537,290.21
		Dividends	8,000.00
		Other expenditures	817,252.85
		Total expenditures, 1913	\$1,362,543.06
Premiums	\$1,812,779.43		
Other sources	306,096.62		
Total income, 1913	\$2,120,875.05		

Nevada Business

Number of risks written	263
Amount of risks written	\$900,000.00
Premiums received	\$27,108.07
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	262
Amount of said policies	\$968,000.00

MANHATTAN LIFE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$100,000.00		
Assets	22,137,996.83		
Liabilities, exclusive of capital and net surplus	21,624,945.37		
		<i>Expenditures</i>	
		Paid policy holders	\$2,387,570.92
		Dividends	16,000.00
		Other expenditures	708,290.88
		Total expenditures, 1913	\$3,111,861.80
Premiums	\$2,105,219.89		
Other sources	1,120,182.32		
Total income, 1913	\$3,225,352.21		

Nevada Business

Number of risks written	4
Amount of risks written	\$10,000.00
Premiums received	\$3,608.96
Losses paid	\$3,000.00
Losses incurred	\$3,000.00
Number of policies in force December 31, 1913	56
Amount of said policies	\$90,906.00

MISSOURI STATE LIFE INSURANCE COMPANY

ST. LOUIS, MISSOURI

Capital (paid up in cash)	\$1,000,000.00		
Assets	9,032,736.66		
Liabilities, exclusive of capital and net surplus	7,559,222.94		
		<i>Expenditures</i>	
		Paid policy holders	\$1,206,174.36
		Dividends	6,000.00
		Other expenditures	1,418,193.10
		Total expenditures, 1913	\$2,630,367.46
Premiums	\$2,801,730.56		
Other sources	4,244,831.19		
Total income, 1913	\$7,046,561.75		

Nevada Business

Number of risks written	49
Amount of risks written	\$117,363.00
Premiums received	\$6,706.00
Losses paid	\$3,000.00
Losses incurred	None
Number of policies in force December 31, 1913	74
Amount of said policies	\$142,958.00

REPORT OF INSURANCE COMMISSIONER

MUTUAL LIFE INSURANCE COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	Mutual		
Assets	\$907,067,044.50		
Liabilities, exclusive of capital and net surplus	607,067,044.50		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$57,954,050.08	Paid policy holders	\$63,881,013.25
Other sources	28,796,440.37	Dividends	None
		Other expenditures	11,475,665.88
Total income, 1913	\$86,749,490.45	Total expenditures, 1913	\$74,856,679.13

Nevada Business

Number of risks written	119
Amount of risks written	\$437,170.00
Premiums received	\$99,235.37
Losses paid	\$24,775.91
Losses incurred	\$23,814.00
Number of policies in force December 31, 1913	1,234
Amount of said policies	\$2,765,230.00

MUTUAL BENEFIT LIFE INSURANCE COMPANY

NEWARK, NEW JERSEY

Capital	Mutual		
Assets	\$166,142,244.11		
Liabilities, exclusive of capital and net surplus	166,142,244.11		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$28,936,471.37	Paid policy holders	\$17,096,749.37
Other sources	8,351,453.49	Dividends	None
		Other expenditures	4,579,719.31
Total income, 1913	\$32,287,924.86	Total expenditures, 1913	\$21,676,468.68

Nevada Business

Number of risks written	Not given
Amount of risks written	\$338.00
Premiums received	\$3,214.80
Losses paid	\$800.00
Losses incurred	\$800.00
Number of policies in force December 31, 1913	59
Amount of said policies	\$150,102.00

NATIONAL LIFE INSURANCE COMPANY OF THE UNITED STATES OF AMERICA

CHICAGO, ILLINOIS

Capital (paid up in cash)	\$500,000.00		
Assets	11,969,251.28		
Liabilities, exclusive of capital and net surplus	11,296,984.19		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$2,647,561.74	Paid policy holders	\$2,074,535.15
Other sources	1,490,716.42	Dividends	50,000.00
		Other expenditures	1,717,075.39
Total income, 1913	\$4,138,278.16	Total expenditures, 1913	\$3,841,609.54

Nevada Business

Number of risks written	2
Amount of risks written	\$8,533.85
Premiums received	\$143.28
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	10
Amount of said policies	\$16,083.85

NEW YORK LIFE INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	Mutual		
Assets	\$748,497,740.10		
Liabilities, exclusive of capital and net surplus	Not given	<i>Expenditures</i>	
		Paid policy holders	\$34,666,912.68
		Dividends	None
		Other expenditures	46,909,248.99
		Total expenditures, 1913	\$81,566,161.67
Premiums	\$89,627,788.31		
Other sources	34,888,600.88		
	<i>Income</i>		
Total income, 1913	\$124,516,389.19		

Nevada Business

Number of risks written	422
Amount of risks written	\$820,471.00
Premiums received	\$233,906.44
Losses paid	\$40,734.60
Losses incurred	\$42,780.12
Number of policies in force December 31, 1913	2,969
Amount of said policies	\$6,902,854.00

NORTHWESTERN MUTUAL LIFE INSURANCE COMPANY
MILWAUKEE, WISCONSIN

Capital (paid up in cash)	Mutual		
Assets	\$310,556,962.46		
Liabilities, exclusive of capital and net surplus	306,241,681.69	<i>Expenditures</i>	
		Paid policy holders	\$36,644,778.79
		Dividends	None
		Other expenditures	8,108,179.65
		Total expenditures, 1913	\$44,747,953.44
Premiums	\$45,583,283.58		
Other sources	15,572,902.50		
	<i>Income</i>		
Total income, 1913	\$61,156,186.08		

Nevada Business

Number of risks written	33
Amount of risks written	\$87,100.00
Premiums received	\$2,141.18
Losses paid	\$4,000.00
Losses incurred	\$4,000.00
Number of policies in force December 31, 1913	241
Amount of said policies	\$475,223.00

OCCIDENTAL LIFE INSURANCE COMPANY
LOS ANGELES, CALIFORNIA

Capital (paid up in cash)	\$250,000.00		
Assets	897,192.51		
Liabilities, exclusive of capital and net surplus	598,497.41	<i>Expenditures</i>	
		Paid policy holders	\$50,333.19
		Dividends	None
		Other expenditures	394,739.12
		Total expenditures, 1913	\$445,072.31
Premiums	\$299,944.09		
Other sources	274,288.73		
	<i>Income</i>		
Total income, 1913	\$574,232.82		

Nevada Business

Number of risks written	32
Amount of risks written	\$51,000.00
Premiums received	\$3,588.95
Losses paid	\$2,500.00
Losses incurred	\$2,500.00
Number of policies in force December 31, 1913	164
Amount of said policies	\$280,500.00

PACIFIC MUTUAL LIFE INSURANCE COMPANY
LOS ANGELES, CALIFORNIA

Capital (paid up in cash)	\$1,000,000.00		
Assets	27,140,597.80		
Liabilities, exclusive of capital and net surplus	26,271,836.39		
		<i>Expenditures</i>	
		Paid policy holders	\$2,584,890.31
		Dividends	115,000.00
		Other expenditures	1,431,625.01
		Total expenditures, 1913	\$4,130,915.32
<i>Income</i>			
Premiums	\$5,416,597.50		
Other sources	1,482,282.12		
Total income, 1913	\$6,898,879.62		

Nevada Business

Number of risks written	50
Amount of risks written	\$144,174.00
Premiums received	\$22,475.91
Losses paid	\$1,377.00
Losses incurred	\$1,377.00
Number of policies in force December 31, 1913	300
Amount of said policies	\$696,063.00

PENN MUTUAL LIFE INSURANCE COMPANY
PHILADELPHIA, PENNSYLVANIA

Capital (paid up in cash)	Mutual		
Assets	\$142,461,658.23		
Liabilities, exclusive of capital and net surplus	142,461,658.23		
		<i>Expenditures</i>	
		Paid policy holders	\$14,998,893.60
		Dividends	None
		Other expenditures	4,664,423.90
		Total expenditures, 1913	\$19,663,317.50
<i>Income</i>			
Premiums	\$21,634,929.36		
Other sources	7,154,153.36		
Total income, 1913	\$28,789,082.72		

Nevada Business

Number of risks written	35
Amount of risks written	\$32,660.00
Premiums received	\$32,463.75
Losses paid	\$2,000.00
Losses incurred	None
Number of policies in force December 31, 1913	404
Amount of said policies	\$951,590.00

PITTSBURG LIFE AND TRUST COMPANY
PITTSBURG, PENNSYLVANIA

Capital (paid up in cash)	\$1,000,000.00		
Assets	23,810,617.35		
Liabilities, exclusive of capital and net surplus	21,941,255.54		
		<i>Expenditures</i>	
		Paid policy holders	\$3,040,492.52
		Dividends	100,000.00
		Other expenditures	1,180,346.49
		Total expenditures, 1913	\$4,320,839.31
<i>Income</i>			
Premiums	\$2,941,758.65		
Other sources	1,562,124.96		
Total income, 1913	\$4,503,883.61		

Nevada Business

Number of risks written	3
Amount of risks written	\$4,500.00
Premiums received	\$1,480.06
Losses paid	\$3,000.78
Losses incurred	\$3,000.78
Number of policies in force December 31, 1913	62
Amount of said policies	\$103,369.00

RELiance LIFE INSURANCE COMPANY

PITTSBURG, PENNSYLVANIA

Capital (paid up in cash)	\$1,000,000.00		
Assets	4,255,990.45		
Liabilities, exclusive of capital and net surplus	2,985,968.81		
		<i>Expenditures</i>	
		Paid policy holders	\$93,976.88
		Dividends	None
		Other expenditures	961,967.06
		Total expenditures, 1913	\$1,045,943.98
Premiums	\$1,435,806.75		
Other sources	238,838.66		
Total income, 1913	\$1,669,140.40		

Nevada Business

Number of risks written	13
Amount of risks written	\$22,000.00
Premiums received	\$2,949.81
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	53
Amount of said policies	\$93,500.00

SAN FRANCISCO LIFE INSURANCE COMPANY

SAN FRANCISCO, CALIFORNIA

Capital (paid up in cash)	\$250,000.00		
Assets	597,586.93		
Liabilities, exclusive of capital and net surplus	252,260.34		
		<i>Expenditures</i>	
		Paid policy holders	\$18,134.76
		Dividends	None
		Other expenditures	276,309.74
		Total expenditures, 1913	\$289,444.50
Premiums	\$275,788.14		
Other sources	38,503.62		
Total income, 1913	\$314,291.76		

Nevada Business

Number of risks written	28
Amount of risks written	\$69,104.62
Premiums received	\$2,629.81
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	33
Amount of said policies	\$75,125.15

TRAVELERS INSURANCE COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$5,000,000.00		
Assets	69,701,936.88		
Liabilities, exclusive of capital and net surplus	66,726,016.74		
		<i>Expenditures</i>	
		Paid policy holders	\$4,765,869.16
		Dividends	1,780,000.00
		Other expenditures	3,181,964.87
		Total expenditures, 1913	\$9,727,824.08
Premiums	\$9,388,879.85		
Other sources	3,782,755.23		
Total income, 1913	\$13,171,635.08		

Nevada Business

Number of risks written	None
Amount of risks written	None
Premiums received	\$1,059.75
Losses paid	None
Losses incurred	None
Number of policies in force December 31, 1913	25
Amount of said policies	\$70,282.00

UNION MUTUAL LIFE INSURANCE COMPANY

PORTLAND, MAINE

Capital	Mutual		
Assets	\$18,182,277.66		
Liabilities, exclusive of capital and net surplus	17,456,714.95		
	<i>Income</i>		<i>Expenditures</i>
Premiums	\$2,389,850.50	Paid policy holders	\$1,060,096.48
Other sources	937,660.48	Dividends	None
		Other expenditures	1,667,653.93
Total income, 1913	\$3,307,510.93	Total expenditures, 1913	\$2,727,690.41

Nevada Business

Number of risks written	32
Amount of risks written	\$74,091.88
Premiums received	\$6,507.90
Losses paid	\$31,008.68
Losses incurred	\$8,823.13
Number of policies in force December 31, 1913	109
Amount of said policies	\$197,814.82

SUMMARY OF NEVADA'S LIFE AND ACCIDENT BUSINESS FOR 1913

Number of risks written	1,363
Amount of risks written	\$3,289,843.41
Premiums received	\$545,823.93
Losses paid	\$123,086.18
Losses incurred	\$94,989.34
Number of policies in force December 31, 1913	7,215
Amount of said policies	\$16,359,867.32

CASUALTY AND SURETY COMPANIES

ETNA ACCIDENT AND LIABILITY COMPANY

HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$1,000,000.00		
Assets	3,083,698.40		
Liabilities, exclusive of capital and net surplus	962,658.46		
		<i>Expenditures</i>	
		Losses	\$359,518.11
		Dividends	80,000.00
		Other expenditures	663,886.90
		Total expenditures, 1913	\$1,103,405.01
<i>Income</i>			
Premiums	\$1,373,127.21		
Other sources	102,409.83		
Total income, 1913	\$1,475,537.04		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Surety		\$67.60	None

AMERICAN SURETY COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$5,000,000.00		
Assets	8,871,339.48		
Liabilities, exclusive of capital and net surplus	2,764,623.30		
		<i>Expenditures</i>	
		Losses	\$865,782.88
		Dividends	500,000.00
		Other expenditures	2,163,668.43
		Total expenditures, 1913	\$3,529,451.31
<i>Income</i>			
Premiums	\$3,070,751.04		
Other sources	636,576.45		
Total income, 1913	\$3,707,327.49		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Fidelity		\$451.80	None
Surety		526.32	None
Totals		\$978.12	None

COLUMBIAN NATIONAL LIFE INSURANCE COMPANY

BOSTON, MASSACHUSETTS

Capital (paid up in cash)	\$1,000,000.00		
Assets	9,214,460.75		
Liabilities, exclusive of capital and net surplus	7,752,667.26		
		<i>Expenditures</i>	
		Losses	\$120,444.88
		Dividends	None
		Other expenditures	150,671.20
		Total expenditures, 1913	\$272,115.68
<i>Income</i>			
Premiums	\$244,397.79		
Other sources	None		
Total income, 1913	\$244,397.79		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident		\$159.08	None
Health		57.30	None
Totals		\$216.38	None

REPORT OF INSURANCE COMMISSIONER

CONTINENTAL CASUALTY COMPANY

HAMMOND, INDIANA.

Capital (paid up in cash)	\$300,000.00	<i>Expenditures</i>	
Assets	2,006,725.21		
Liabilities, exclusive of capital and net surplus	1,242,460.37	Losses	\$1,453,614.86
<i>Income</i>		Dividends	60,000.00
Premiums	\$3,210,579.40	Other expenditures	1,968,626.56
Other sources	204,480.98	Total expenditures, 1913	\$3,502,241.42
Total income, 1913	\$3,415,060.38		

<i>Nevada Business</i>		PREMIUMS	LOSSES
Accident		\$17,996.31	\$15,994.07
Health		6,389.39	2,211.76
Totals		\$24,385.70	\$18,205.83

EMPLOYERS' LIABILITY ASSURANCE CORPORATION (Limited)

LONDON, ENGLAND

Capital	\$200,000.00	<i>Expenditures</i>	
Assets	7,318,463.30		
Liabilities, exclusive of capital and net surplus	4,967,057.83	Losses	\$3,089,146.04
<i>Income</i>		Dividends	None
Premiums	\$6,151,052.09	Other expenditures	3,518,887.16
Other sources	240,858.62	Total expenditures, 1913	\$6,558,033.20
Total income, 1913	\$6,391,910.71		

<i>Nevada Business</i>		PREMIUMS	LOSSES
Accident		\$386.75	None
Automobile property damage			\$110.00
Health		48.75	25.00
Liability			28.80
Workmen's collective		274.01	None
Totals		\$711.51	\$163.80

FIDELITY AND CASUALTY COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$1,000,000.00	<i>Expenditures</i>	
Assets	11,063,356.70		
Liabilities, exclusive of capital and net surplus	8,055,163.65	Losses	\$3,864,855.49
<i>Income</i>		Dividends	200,000.00
Premiums	\$8,589,460.87	Other expenditures	4,778,720.12
Other sources	698,206.06	Total expenditures, 1913	\$8,863,605.61
Total income, 1913	\$9,287,666.93		

<i>Nevada Business</i>		PREMIUMS	LOSSES
Accident		\$95.00	None
Burglary and theft		116.94	None
Fidelity		12.50	None
Health		120.65	None
Totals		\$345.09	None

FIDELITY AND DEPOSIT COMPANY
BALTIMORE, MARYLAND

Capital (paid up in cash)	\$3,000,000.00		
Assets	11,241,268.04		
Liabilities, exclusive of capital and net surplus	6,062,488.45		
		<i>Expenditures</i>	
		Losses	\$1,941,836.88
		Dividends	880,000.00
		Other expenditures	3,461,835.86
		Total expenditures, 1913	\$6,283,672.74
<i>Income</i>			
Premiums	\$6,663,660.08		
Other sources	1,652,813.83		
Total income, 1913	\$8,316,473.91		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Burglary and theft	\$31.05	None
Fidelity	398.92	None
Plate glass	120.00	None
Surety	180.62	None
Totals	\$730.59	None

GUARDIAN CASUALTY AND GUARANTY COMPANY
SALT LAKE CITY, UTAH

Capital (paid up in cash)	\$250,000.00		
Assets	746,749.59		
Liabilities, exclusive of capital and net surplus	261,381.84		
		<i>Expenditures</i>	
		Losses	\$218,621.57
		Dividends	30,000.00
		Other expenditures	190,873.57
		Total expenditures, 1913	\$439,495.14
<i>Income</i>			
Premiums	\$495,807.47		
Other sources	43,962.09		
Total income, 1913	\$539,569.56		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident	\$1,807.80	\$86.42
Fidelity	7.00	None
Health	1,272.20	129.27
Liability	7,710.85	10,896.60
Workmen's collective	3,814.06	517.09
Totals	\$14,612.26	\$11,629.38

HARTFORD STEAM BOILER INSPECTION AND INSURANCE COMPANY
HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$1,000,000.00		
Assets	5,412,495.55		
Liabilities, exclusive of capital and net surplus	2,439,986.15		
		<i>Expenditures</i>	
		Losses	\$208,163.62
		Dividends	120,000.00
		Other expenditures	\$1,289,489.50
		Total expenditures, 1913	\$1,617,653.12
<i>Income</i>			
Premiums	\$1,572,704.42		
Other sources	280,217.54		
Total income, 1913	\$1,852,921.96		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Steam boiler	\$335.65	None

REPORT OF INSURANCE COMMISSIONER

LLOYD PLATE GLASS INSURANCE COMPANY
NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$250,000.00	<i>Expenditures</i>	
Assets	910,067.15		
Liabilities, exclusive of capital and net surplus	395,988.96	Losses	\$223,033.83
<i>Income</i>		Dividends	50,000.00
Premiums	\$569,800.80	Other expenditures	361,688.76
Other sources	56,241.62	Total expenditures, 1913	\$634,072.61
Total income, 1913	\$626,042.42		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Plate glass	\$784.16	\$70.13

MARYLAND CASUALTY COMPANY
BALTIMORE, MARYLAND

Capital (paid up in cash)	\$1,000,000.00	<i>Expenditures</i>	
Assets	6,628,777.00		
Liabilities, exclusive of capital and net surplus	4,503,129.79	Losses	\$3,073,652.33
<i>Income</i>		Dividends	200,000.00
Premiums	\$6,185,482.05	Other expenditures	3,471,584.71
Other sources	324,257.44	Total expenditures, 1913	\$6,745,237.04
Total income, 1913	\$6,509,739.49		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident	\$200.00	\$175.00
Automobile property damage	30.00	None
Burglary and theft	148.44	None
Health	45.00	17.86
Liability	262.50	2,688.95
Physician's defense	135.00	25.00
Plate glass	67.30	11.28
Sprinkler	None	34.16
Steam boiler	105.33	None
Workmen's collective	187.53	126.10
Totals	\$1,171.10	\$3,078.35

MASSACHUSETTS BONDING AND INSURANCE COMPANY
BOSTON, MASSACHUSETTS

Capital (paid up in cash)	\$1,000,000.00	<i>Expenditures</i>	
Assets	3,476,171.54		
Liabilities, exclusive of capital and net surplus	2,176,840.78	Losses	\$962,320.95
<i>Income</i>		Dividends	80,000.00
Premiums	\$3,184,763.84	Other expenditures	1,516,830.66
Other sources	96,464.68	Total expenditures, 1913	\$2,559,151.61
Total income, 1913	\$3,281,228.52		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Fidelity	\$83.33	None

NATIONAL CASUALTY COMPANY

DETROIT, MICHIGAN

Capital (paid up in cash)	\$200,000.00	<i>Expenditures</i>	
Assets	345,169.21		
Liabilities, exclusive of capital and net surplus	50,673.00	Losses	\$300,401.65
<i>Income</i>		Dividends	16,000.00
Premiums	\$705,222.11	Other expenditures	441,297.59
Other sources	57,469.90	Total expenditures, 1913	\$757,699.24
Total income, 1913	\$762,692.01		

Nevada Business

None.

NATIONAL SURETY COMPANY

NEW YORK CITY, NEW YORK

Capital (paid up in cash)	\$2,000,000.00	<i>Expenditures</i>	
Assets	7,158,984.05		
Liabilities, exclusive of capital and net surplus	3,658,984.05	Losses	\$1,114,078.14
<i>Income</i>		Dividends	239,748.00
Premiums	\$3,111,896.58	Other expenditures	1,992,934.35
Other sources	298,809.53	Total expenditures, 1913	\$3,346,760.49
Total income, 1913	\$3,410,706.11		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Burglary and theft	\$221.71	None
Fidelity	2,302.10	\$123.31
Surety	2,076.15	None
Totals	\$4,599.96	\$123.31

NORTH AMERICAN ACCIDENT INSURANCE COMPANY

CHICAGO, ILLINOIS

Capital (paid up in cash)	\$200,000.00	<i>Expenditures</i>	
Assets	741,612.18		
Liabilities, exclusive of capital and net surplus	291,470.12	Losses	\$455,678.22
<i>Income</i>		Dividends	40,000.00
Premiums	\$1,145,618.48	Other expenditures	908,762.62
Other sources	266,014.62	Total expenditures, 1913	\$1,404,440.84
Total income, 1913	\$1,411,633.10		

<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident	\$2,589.19	\$1,195.41

REPORT OF INSURANCE COMMISSIONER

PACIFIC COAST CASUALTY COMPANY

SAN FRANCISCO, CALIFORNIA

Capital (paid up in cash)	\$300,000.00		
Assets	646,248.17		
Liabilities, exclusive of capital and net surplus	257,271.55		
		<i>Expenditures</i>	
		Losses	\$278,754.43
		Dividends	17,600.00
		Other expenditures	359,059.54
		Total expenditures, 1913	\$655,414.03
<i>Income</i>			
Premiums	\$415,072.73		
Other sources	136,976.58		
Total income, 1913	\$552,049.31		

	<i>Nevada Business</i>	<i>PREMIUMS</i>	<i>LOSSES</i>
Accident		\$1,070.48	\$1,061.81
Surety		55.00	None
Totals		\$1,125.48	\$1,061.81

PACIFIC MUTUAL LIFE INSURANCE COMPANY

LOS ANGELES, CALIFORNIA

Capital (paid up in cash)	\$1,000,000.00		
Assets	2,197,554.19		
Liabilities, exclusive of capital and net surplus	1,122,154.19		
		<i>Expenditures</i>	
		Losses	\$394,307.47
		Dividends	80,000.00
		Other expenditures	1,028,081.60
		Total expenditures, 1913	\$2,002,399.07
<i>Income</i>			
Premiums	\$1,970,612.85		
Other sources	236,150.09		
Total income, 1913	\$2,206,762.94		

	<i>Nevada Business</i>	<i>PREMIUMS</i>	<i>LOSSES</i>
Accident		\$8,542.62	\$3,893.02
Health		2,191.14	803.50
Totals		\$10,733.76	\$4,196.52

STANDARD ACCIDENT INSURANCE COMPANY

DETROIT, MICHIGAN

Capital (paid up in cash)	\$500,000.00		
Assets	4,457,338.01		
Liabilities, exclusive of capital and net surplus	2,440,436.41		
		<i>Expenditures</i>	
		Losses	\$1,539,724.09
		Dividends	70,000.00
		Other expenditures	1,578,416.05
		Total expenditures, 1913	\$3,188,140.14
<i>Income</i>			
Premiums	\$3,153,881.75		
Other sources	225,999.95		
Total income, 1913	\$3,379,881.70		

	<i>Nevada Business</i>	<i>PREMIUMS</i>	<i>LOSSES</i>
Accident		\$263.81	None
Health		81.19	None
Totals		\$345.00	None

TITLE GUARANTY AND SURETY COMPANY
SCRANTON, PENNSYLVANIA

Capital (paid up in cash)	\$1,000,000.00		
Assets	2,072,362.96		
Liabilities, exclusive of capital and net surplus	801,473.57		
		<i>Expenditures</i>	
		Losses	\$372,356.69
		Dividends	None
		Other expenditures	739,171.27
		Total expenditures, 1913	\$1,111,527.96
<i>Income</i>			
Premiums	\$918,262.00		
Other sources	80,436.16		
Total income, 1913	\$998,698.16		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Fidelity		\$464.75	\$71.00

TRAVELERS INSURANCE COMPANY
HARTFORD, CONNECTICUT

Capital (paid up in cash)	\$5,000,000.00		
Assets	18,066,450.25		
Liabilities, exclusive of capital and net surplus	10,319,141.61		
		<i>Expenditures</i>	
		Losses	\$6,590,881.80
		Dividends	1,520,000.00
		Other expenditures	6,861,927.14
		Total expenditures, 1913	\$14,972,808.94
<i>Income</i>			
Premiums	\$13,141,348.23		
Other sources	736,506.79		
Total income, 1913	\$13,876,855.02		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident		\$376.20	\$250.70

UNITED STATES FIDELITY AND GUARANTY COMPANY
BALTIMORE, MARYLAND

Capital (paid up in cash)	\$2,000,000.00		
Assets	7,701,076.09		
Liabilities, exclusive of capital and net surplus	4,960,916.06		
		<i>Expenditures</i>	
		Losses	\$2,487,467.21
		Dividends	200,000.00
		Other expenditures	3,395,392.24
		Total expenditures, 1913	\$6,082,859.45
<i>Income</i>			
Premiums	\$6,295,907.97		
Other sources	340,369.87		
Total income, 1913	\$6,636,277.94		

	<i>Nevada Business</i>	PREMIUMS	LOSSES
Accident		\$130.14	\$144.00
Automobile property damage		18.13	None
Burglary and theft		606.89	None
Fidelity		2,406.45	None
Health		35.00	None
Surety		1,995.77	1,199.65
Totals		\$5,192.38	\$1,343.65

**SUMMARY OF NEVADA'S CASUALTY AND SURETY BUSINESS
FOR 1913**

	PREMIUMS	LOSSES
Accident.....	\$33,619.38	\$22,790.43
Automobile property damage.....	48.13	110.00
Burglary and theft.....	1,125.03	None
Fidelity.....	6,119.85	194.31
Health.....	10,240.62	2,687.39
Liability.....	7,963.35	13,614.35
Physician's defense.....	135.00	25.00
Plate glass.....	971.46	81.41
Sprinkler.....	None	34.16
Steam boiler.....	440.98	None
Surety.....	4,901.36	1,199.65
Workmen's collective.....	4,275.60	643.19
Totals.....	\$69,840.76	\$41,379.89

LOAN AND BUILDING COMPANIES

WESTERN LOAN AND BUILDING COMPANY SALT LAKE CITY, UTAH

Capital (authorized).....	\$12,000,000.00	Income for 1913.....	\$1,043,375.19
Assets.....	1,986,743.74		
Liabilities, exclusive of surplus.....	1,886,542.91	Expenditures for 1913.....	\$1,087,080.06

STATE OF NEVADA

ANNUAL INSURANCE REPORT

Summary of financial condition on
December 31, 1914, and business
for the year of all Insurance Com-
panies authorized to do business in
Nevada during 1915

COMPILED FROM ANNUAL STATEMENTS

BY

GEO. A. COLE

State Controller and ex officio Insurance Commissioner

WM. McKNIGHT, Deputy



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : JOE FARNSWORTH, SUPERINTENDENT
1915



REPORT OF INSURANCE COMMISSIONER

To HON. EMMET D. BOYLE, Governor of Nevada:

The following statement, showing financial condition on December 31, 1914, and business for the year, of all insurance companies authorized to do business in Nevada during 1915, is respectfully submitted.

A handwritten signature in cursive script, reading "Geo. A. Cole".

State Controller and ex officio Insurance Commissioner.

FIRE INSURANCE COMPANIES

Company	Financial condition				Nevada business			
	Paid-up capital, or statutory deposit	Gross assets	Liabilities, except capital	Net surplus	Risks written	Premiums received	Losses incurred	Losses paid
Aachenand Munich, Aix-La-Chapelle, Germany	\$200,000.00	\$2,664,663.14	\$1,446,473.49	\$1,018,189.65	\$111,300.00	\$2,434.28	\$306.30	\$306.30
Ætna, Hartford, Conn.	5,000,000.00	23,400,626.99	11,782,078.60	6,668,448.39	709,453.00	18,337.09	11,416.88	11,376.88
Agricultural, Watertown, New York	500,000.00	4,378,283.21	2,310,256.33	1,568,026.88	181,000.00	4,099.06	1,122.90	1,594.44
Alliance, Philadelphia, Pa.	750,000.00	2,884,307.74	884,267.74	750,000.00	118,675.00	2,622.77	2,806.22	2,808.22
American Central, St. Louis, Mo.	1,000,000.00	4,320,690.48	2,163,885.00	1,166,706.48	59,612.00	1,311.27	1,231.43	1,231.43
Atlas Assurance, Ltd., London, England	200,000.00	2,962,091.62	1,867,177.28	884,914.34	887,674.00	9,200.84	2,865.57	2,865.57
Balkan National, Sofia, Bulgaria	200,000.00	2,066,554.94	1,484,380.94	372,174.00	55,379.00	712.43	694.38	59.88
Caledonian, Edinburgh, Scotland	200,000.00	2,284,041.17	1,688,801.57	400,239.60	138,027.00	3,828.89	1,907.50	1,907.50
California, San Francisco, Cal.	400,000.00	1,024,513.06	444,914.96	179,698.10	517,339.00	9,121.82	2,417.93	1,477.93
Citizens, St. Louis, Mo.	200,000.00	601,680.30	37,727.89	368,952.41	196,875.00	3,660.41	1,064.84	1,064.84
Commercial Union Assurance, Ltd., London	200,000.00	9,204,052.75	7,020,608.79	1,993,448.96	4,984,965.00	11,422.81	2,643.66	43.65
Concordia, Milwaukee, Wis.	600,000.00	2,415,965.14	1,424,673.08	891,292.06	62,137.00	1,732.23	6.96	6.96
Connecticut, Hartford, Conn.	1,000,000.00	6,769,129.67	4,510,006.04	1,259,123.63	408,602.00	8,746.40	1,102.84	1,065.94
Continental, New York	2,000,000.00	27,588,192.23	11,162,722.21	14,426,470.02	468,077.00	6,289.90	1,128.41	1,127.48
Delaware Underwriters, New York	500,000.00	5,948,795.08	3,867,280.35	1,581,454.73	82,583.00	2,763.86	42.07	96.89
Detroit Fire and Marine, Detroit, Mich.	500,000.00	2,274,403.76	740,666.57	1,033,737.18	131,229.00	2,378.72	15.04	185.04
Fidelity-Phenix, New York	2,500,000.00	15,278,998.56	8,749,600.72	4,029,392.84	87,315.00	1,948.08	839.31	771.48
Fire Association of Philadelphia, Pa.	750,000.00	9,106,476.74	6,103,704.65	2,232,772.09	648,723.00	13,031.09	3,020.30	6,270.30
Fireman's Fund, San Francisco, Cal.	1,800,000.00	10,176,434.49	6,400,376.98	2,276,068.51	1,232,356.00	14,012.57	4,371.73	4,183.73
Fire Reassurance, Paris, France	1,800,000.00	6,836,715.87	1,227,513.06	206,197.81	61,022.00	1,382.67	908.06	12.06
First National, Washington, D. C.	899,535.70	1,614,627.81	310,664.49	404,407.32	57,687.00	5,712.64	644.00	644.00
First Reinsurance, Hartford, Conn.	500,000.00	742,419.34	742,419.34	567,689.39	801,783.00	5,716.75	1,469.56	1,382.10
First Bulgarian, Ruschuk, Bulgaria	200,000.00	1,800,000.00	943,669.36	526,908.27	36,778.00	569.87	432.96	432.96
First Russian, St. Petersburg, Russia	200,000.00	1,470,607.63	1,021,320.07	296,976.76	67,612.00	1,776.41	67.19	67.19
Frankona Reinsurance, Frankfurt-on-the-Main, Germany	200,000.00	864,218.52	570,067.41	94,161.11	73,624.00	1,635.56	678.92	678.92
German Alliance, New York	400,000.00	1,882,250.45	680,795.58	801,454.87	35,513.00	840.26	478.31	478.31

German American, New York	2,000,000.00	21,490,693.88	10,456,710.28	9,083,913.55	232,746.00	5,104.92	3,905.23	3,155.23
Globe and Rutgers, New York	400,000.00	8,966,071.46	4,946,376.80	3,619,684.66	387,850.00	6,041.71	771.82	1,444.83
Hamburg Assurance, Hamburg, Germany	200,000.00	4,184,085.90	3,596,941.88	387,144.02	352,555.00	6,355.45	1,989.65	965.85
Hamburg Bremen, Hamburg, Germany	200,000.00	1,876,636.90	1,315,339.75	960,247.15	30,750.00	843.41		
Hartford, Hartford, Conn.	2,000,000.00	25,954,089.46	17,910,996.34	7,043,103.12	1,977,142.00	37,574.74	11,268.26	13,215.91
Home, New York	6,000,000.00	35,813,539.27	18,610,065.11	10,708,474.16	1,154,703.00	18,132.12	4,082.49	3,944.49
Insurance Co. of North America, Philadelphia	4,000,000.00	18,310,715.10	10,310,715.10	4,000,000.00	416,456.00	8,396.66	4,463.08	4,538.08
International Insurance, New York	200,000.00	325,710.36	71,546.71	64,163.65	696.18		6.85	1,809.18
International Reassurance, Vienna, Austria	200,000.00	874,808.18	463,396.95	231,411.23	31,915.00	526.78		6.85
Jakor, Moscow, Russia	200,000.00	2,857,353.24	2,375,873.86	281,479.38	245,316.00	4,315.57	1,960.74	2,169.24
Law Union and Rock, London, England	200,000.00	1,320,887.76	445,596.19	675,291.59	228,050.00	4,399.48	111.44	111.44
Liverpool and London and Globe, New York	200,000.00	1,188,654.05	400,674.01	557,980.04	6,500.00	149.49		
Liverpool and London and Globe Ltd., Liverpool	200,000.00	14,783,615.69	9,961,463.20	4,622,155.49	674,964.00	15,069.89	7,015.83	7,010.83
London and Lancashire, Liverpool, England	200,000.00	4,864,379.73	3,079,389.14	1,584,990.59	320,937.00	7,115.88		
London Assurance Corporation, London	200,000.00	3,913,423.41	2,912,188.17	801,246.24	1,104,678.00	22,922.88	5,642.06	5,552.06
London Underwriters, London	200,000.00	3,913,423.41	2,912,188.17	801,246.24	72,947.00	1,604.48	277.54	277.54
Manchester Assurance, London	200,000.00	3,078,015.77	1,956,640.57	921,375.20	45,150.00	799.37		
Michigan Fire and Marine, Detroit, Mich.	400,000.00	1,524,381.67	778,386.37	345,996.20	106,894.00	2,872.08	280.64	1,157.35
Moscow, Moscow, Russia	200,000.00	2,077,817.12	1,444,880.23	431,986.89	150,400.00	3,620.90	134.64	132.64
Munich Reinsurance, Munich, Germany	305,000.00	6,891,597.94	5,405,921.71	1,180,676.23	359,008.00	7,520.84	1,083.97	1,564.97
National, Hartford, Conn.	2,000,000.00	16,049,725.44	10,443,550.22	3,606,175.22	109,976.00	3,172.26	2,820.51	3,185.51
Nevada, Carson City, Nevada	112,441.00	141,046.19	6,908.36	21,696.83	420,504.00	9,924.05	1,801.80	1,801.80
Newark, Newark, N. J.	500,000.00	2,117,177.67	1,101,729.34	515,448.33	113,890.00	3,798.45	62.35	246.96
New York Underwriters, Hartford, Conn.	2,000,000.00	28,964,096.46	17,910,996.34	7,043,103.12	377,383.00	7,991.46	4,417.35	4,823.16
New Zealand, Ltd., Auckland, New Zealand	200,000.00	888,479.40	408,330.10	230,149.30	234,837.00	4,629.80	1,164.04	1,164.04
Niagara, New York	1,000,000.00	7,502,873.16	4,115,440.15	2,387,433.01	785,856.00	14,248.57	2,388.79	2,388.79
Northern Assurance, Ltd., London	200,000.00	5,683,800.63	3,304,860.21	2,078,940.42	254,364.00	6,561.40	4,173.67	4,128.67
Northern, Moscow, Russia	200,000.00	1,040,965.32	752,272.68	88,682.39	67,594.00	1,407.72	667.90	667.90
North British and Mercantile, London	200,000.00	8,921,607.68	5,304,831.69	3,416,776.09	533,797.00	12,284.12	1,952.82	2,997.82
Norwich Union, Ltd., London	200,000.00	3,127,486.69	1,944,401.17	983,065.52	199,188.00	4,243.73	4,017.48	3,486.45
Orient, Hartford, Conn.	1,000,000.00	3,723,644.86	1,721,579.42	1,002,045.44	68,909.00	2,292.78	2,282.45	2,302.45
Palatine, Ltd., London	200,000.00	3,185,774.33	2,181,336.08	804,438.25	271,785.00	5,246.28	122.95	122.95
Paternelle, Paris, France	200,000.00	882,242.93	526,478.75	155,764.18	49,063.00	863.12	600.32	453.76
Pennsylvania, Philadelphia	750,000.00	8,090,190.07	5,151,636.73	2,188,563.34	438,796.00	7,699.16	4,135.13	3,371.54

FIRE INSURANCE COMPANIES—Continued

Company	Financial condition				Nevada business			
	Paid-up capital, or statutory deposit	Gross assets	Liabilities, except capital	Net surplus	Risks written	Premiums received	Losses incurred	Losses paid
Philadelphia Underwriters, Philadelphia, Pa.	\$4,760,000.00	\$27,417,191.84	\$15,792,220.82	\$6,874,971.02	\$254,102.00	\$5,524.62	\$1,374.14	\$1,374.14
Phoenix Assurance, Ltd., London	200,000.00	4,027,712.25	2,635,550.96	1,292,161.30	391,175.00	7,696.65	1,997.26	1,997.26
Phoenix, Hartford, Conn.	3,000,000.00	14,563,612.86	6,290,205.88	5,273,406.98	229,067.00	6,362.38	1,339.03	2,423.68
Providence Washington, Providence, R. I.	1,000,000.00	5,193,961.52	3,317,421.82	876,539.70	70,066.86	1,527.88	235.73	235.73
Queen, New York	1,000,000.00	10,187,030.04	5,165,587.55	4,021,442.19	740,061.00	17,680.49	5,745.35	8,235.35
Rossia, St. Petersburg, Russia	200,000.00	6,233,165.37	4,935,011.64	1,098,153.73	310,533.00	4,758.30	4,500.27	3,172.27
Royal, Ltd., Liverpool, England	500,000.00	13,291,637.18	9,631,074.76	8,200,562.42	1,263,498.00	29,516.78	6,896.43	8,981.43
Russian Reinsurance, St. Petersburg, Russia	200,000.00	1,602,187.38	1,070,969.19	331,818.19	137,255.00	3,001.76	817.79	846.79
Salamandra, St. Petersburg, Russia	200,000.00	2,889,032.24	2,387,130.47	301,901.77	245,315.00	4,315.56	1,989.74	2,189.25
St. Paul Fire and Marine, St. Paul, Minn.	1,000,000.00	10,162,464.84	6,945,811.77	3,216,643.07	169,762.00	3,299.23	2,101.08	2,101.08
Scottish Union and National, Edinburgh	200,000.00	6,362,813.98	2,734,004.66	3,428,809.32	213,222.00	5,124.78	401.11	1,896.64
Skandia, Stockholm, Sweden	330,000.00	1,434,041.70	925,795.99	178,245.71	98,560.00	2,184.35	3.81	3.81
South German Reinsurance, Munich, Germany	200,000.00	1,238,031.24	664,754.08	373,277.16	116,698.00	2,866.71	11.36	11.36
Springfield Fire and Marine, Springfield, Mass.	2,500,000.00	10,970,404.14	6,479,967.61	1,990,496.53	617,428.00	17,862.13	8,679.68	9,398.68
Sun Insurance Office, London	200,000.00	4,859,613.80	3,312,255.55	1,347,357.95	390,993.00	9,815.01	1,671.62	1,661.77
Svea Fire and Life, Gothenburg, Sweden	200,000.00	1,838,370.99	978,721.97	409,649.02	190,337.00	6,541.01	1,619.45	1,904.30
Swiss National, Ltd., Basle, Switzerland	200,000.00	1,991,316.56	1,642,686.42	148,630.16	184,283.00	3,444.49	472.89	517.89
Swiss Reinsurance, Zurich, Switzerland	200,000.00	1,028,067.31	707,024.60	119,042.71	188,718.00	1,862.80	29.80	14.72
Second Russian Insurance, Petrograd, Russia	200,000.00	1,203,606.04	915,113.96	35,491.68	98,127.00	1,736.23	797.23	504.63
Sterling, Indianapolis, Indiana	850,000.00	1,604,063.98	442,602.08	311,481.90				
Union Assurance Society, Ltd., London	200,000.00	1,458,339.14	590,026.17	668,312.97	291,993.00	5,211.36	87.71	106.43
Union and Phenix Espanol, Madrid, Spain	200,000.00	1,339,151.63	1,076,549.64	62,351.99	224,248.00	4,761.35	550.06	2,060.06
Vulcan, Oakland, Cal.	500,000.00	982,967.00	91,250.00	391,717.00				
Warsaw, Warsaw, Russia	200,000.00	754,072.59	474,235.45	79,397.14	45,925.00	1,185.12	658.95	983.31
Westchester, New York	500,000.00	5,948,735.06	3,867,280.35	1,631,494.73	175,836.00	3,880.25	12.50	187.06

Western Assurance, Toronto, Canada.....	212,000.00	2,538,198.81	1,506,850.56	964,847.75	218,495.00	8,364.27	854.85	839.85
Totals.....	\$68,288,976.70	\$529,841,157.85	\$317,092,617.30	\$155,979,563.85	\$29,791,758.96	\$520,879.73	\$168,638.18	\$167,291.84

LIFE INSURANCE COMPANIES

Company	Financial condition				Nevada business			
	Paid-up capital, or statutory deposit	Gross assets	Liabilities, except capital	Net surplus	Risks written	Premiums received	Losses incurred	Losses paid
Amicable, Waco, Texas.....	\$520,000.00	\$2,235,214.18	\$1,465,214.18					
Bankers Reserve, Omaha, Nebraska.....	100,000.00	\$,012,809.15	4,131,168.67	\$781,640.48	\$179.50	\$648.43		
Beneficial, Salt Lake City, Utah.....	200,000.00	1,182,521.86	832,353.82	150,168.04	52,350.00	3,377.81		
California State, Sacramento, Cal.....	500,000.00	1,222,412.88	421,832.02	300,480.86	177,000.00	20,986.12		
Capitol, Denver, Colo.....	100,000.00	1,537,814.06	1,357,664.70	130,149.36	10,000.00	1,532.55		
Columbian National, Boston, Mass.....	1,000,000.00	10,353,911.02	8,900,644.07	463,266.95	86,750.00	10,803.92		
Continental, Salt Lake City, Utah.....	208,875.00	1,309,232.08	1,054,140.01	46,217.07	202,500.00	14,014.34	\$5,214.91	\$214.91
Equitable Life Assurance Society, New York.....	100,000.00	536,376,840.34	525,402,096.15	10,874,744.19	204,000.00	42,189.70	5,000.00	5,000.00
Home, New York.....	125,000.00	30,631,248.70	28,514,599.88	1,991,648.82	936.71	4,949.30	3,925.71	3,925.71
Idaho State, Boise, Idaho.....	200,000.00	422,557.51	187,120.55	35,436.96	4,500.00	529.92		
Kansas City, Kansas City, Mo.....	100,000.00	4,953,980.20	4,713,373.88	140,556.82	297,000.00	23,424.11		
Manhattan, New York.....	100,000.00	21,658,390.35	21,270,888.56	287,501.79	7,000.00	3,686.97	5,000.00	5,000.00
Missouri State, St. Louis, Mo.....	1,000,000.00	10,511,516.72	8,850,408.72	661,110.00	11,866.92	5,091.73		
Mutual, New York.....		611,033,800.53	611,033,800.53		362,080.00	100,481.60	31,925.00	31,925.00
Mutual Benefit, Newark, N. J.....		176,733,516.45	176,733,516.45		4,382.00	3,287.81		
National, Chicago, Ill.....	500,000.00	12,690,285.21	11,979,280.64	211,024.57		232.64		
New York, New York.....		790,935,395.61	790,935,395.61		689,927.00	241,314.02	71,838.62	77,121.62
Northwestern Mutual, Milwaukee, Wis.....		323,247,426.88	321,852,276.87	6,415,150.01	247,500.00	9,344.34	7,000.00	7,000.00
Occidental, Los Angeles, Cal.....	250,000.00	1,052,138.72	774,174.66	27,964.06	175,000.00	11,377.62	3,145.65	3,145.65
Pacific Mutual, Los Angeles, Cal.....	1,000,000.00	32,604,612.25	30,588,096.45	1,016,515.80	95,440.00	22,799.57	2,832.00	2,832.00
Penn Mutual, Philadelphia, Pa.....		151,940,637.32	151,940,637.32		86,500.00	29,684.31	14,298.00	14,298.00
Pittsburg Life and Trust, Pittsburg, Pa.....	1,000,000.00	24,262,555.46	22,299,580.48	902,975.08	7,000.00	1,688.60		

Reliance, Pittsburg, Pa.....	1,000,000.00	4,832,008.49	3,552,155.19	279,853.30	1,000.00	2,041.23	-----
San Francisco, San Francisco, Cal.....	250,000.00	680,077.79	374,753.52	55,324.27	24.00	1,173.61	-----
Travelers, Hartford, Conn.....	-----	76,987,394.63	71,251,179.99	5,716,214.64	4,500.00	1,005.90	4,500.00
Union Mutual, Portland, Me.....	-----	13,451,232.21	17,765,213.33	686,063.88	79,039.57	8,679.30	2,000.00
West Coast San Francisco, San Francisco, Cal.....	200,000.00	260,069.23	69.23	60,000.00	-----	-----	-----
Totals	\$8,753,875.00	\$2,858,149,599.83	\$2,818,161,712.93	\$31,234,011.90	\$2,805,915.70	\$564,257.35	\$152,462.59

FIDELITY AND CASUALTY INSURANCE COMPANIES

Company	Financial condition				Nevada business				
	Paid-up capital	Gross assets	Liabilities, except capital	Net surplus	Nature	Premiums received	Total premiums	Losses paid	Total losses
Etma Accident and Liability, Hartford, Conn.....	\$1,000,000.00	\$3,382,950.49	\$1,307,065.15	\$1,065,885.34	Fidelity Surety	\$46.76 124.33			
American Surety, New York.....	5,000,000.00	8,869,248.91	3,435,543.19	483,705.72	Burglary, theft Sprinkler	131.25 530.93	\$302.34	\$43.42	\$43.42
Columbian National, Boston, Mass....	1,000,000.00	10,363,911.02	8,900,644.07	463,266.95	Fidelity Surety	1,002.73 138.87	1,533.66	\$2,623.52	2,623.52
Continental Casualty, Hammond, Ind....	300,000.00	2,005,437.95	1,405,437.95	300,000.00	Health	80.13	219.00	25.00	25.00
Employers' Liability Assurance Corporation, Ltd., London.....	350,000.00	8,344,957.76	6,045,623.95	1,949,333.80	Accident Health	152.50 35.00	18,779.83	4,378.09 2,234.46	6,612.55
Fidelity and Deposit, Baltimore, Md....	3,000,000.00	10,963,804.20	6,380,150.33	1,603,653.87	Liability Burglary, theft Fidelity	107.57 77.68 490.84	372.75	5.00	5.00
Guardian Casualty and Guaranty, Salt Lake City, Utah.....	250,000.00	968,744.93	451,352.25	357,392.68	Surety Plate glass Burglary, theft Auto and teams	252.25 118.83		207.90 240.00	
							861.42	2.75	450.65
Guardian Casualty and Guaranty, Salt Lake City, Utah.....	250,000.00	968,744.93	451,352.25	357,392.68	Accident Health	4,526.23 319.55	608.73	608.73	
Hartford Steam Boiler Inspection and Insurance, Hartford, Conn.....	1,000,000.00	5,659,573.50	2,479,845.73	2,179,727.77	Liability Fidelity	5.00	4,860.78	4,200.73	4,809.46
Hartford Steam Boiler Inspection and Insurance, Hartford, Conn.....	1,000,000.00	5,659,573.50	2,479,845.73	2,179,727.77	Steam boiler	279.09	279.09	435.75	435.75
Lloyd's Plate Glass, New York.....	250,000.00	909,651.71	392,134.29	237,517.42	Plate glass	940.88	940.88	123.70	123.70

Maryland Casualty, Baltimore, Md.	1,000,000.00	6,893,373.25	4,782,315.93	1,111,067.32	Accident	429.61			
					Health	138.29			
					Liability	231.67			
					Workmen com.	164.28			
					Plate glass	56.30			
					Steam boiler	5.38			
					Burglary, theft	89.49			
					Sprinkler		166.09		
					Fly wheel	196.00			
					Auto and teams	30.00			
National Casualty, Detroit, Mich.	200,000.00	352,629.89	54,722.00	97,907.89	Physicians' def.	106.00	1,445.00		166.09
					Accident	261.83	261.83		174.83
					Fidelity	2,067.11		1,228.90	
					Surety	2,613.08		1,138.48	
National Surety, New York	2,000,000.00	7,411,250.05	3,534,719.74	1,876,530.31	Burglary, theft	20.87	4,691.06		2,357.28
					Accident	2,490.15	2,490.15	1,566.89	1,566.89
					Accident			962.65	
North American Accident, Chicago	200,000.00	745,947.82	325,521.01	220,426.81	Accident	3,068.04	3,123.04		982.65
					Surety	56.00		1,877.44	
Pacific Coast Casualty, San Francisco	300,000.00	689,087.15	321,372.17	67,214.98	Accident	7,980.50	10,169.78	766.76	2,444.20
					Health	2,189.28			
Pacific Mutual, Los Angeles, Cal.	1,000,000.00	32,604,612.25	30,598,096.45	1,016,515.80	Accident	286.54			
					Health	126.96	412.50		
Standard Accident, Detroit, Mich.	1,000,000.00	4,930,330.21	2,832,165.25	1,098,164.96	Health	325.25	325.25	706.00	706.00
					Accident				
Travelers, Hartford, Conn.	5,000,000.00	19,965,882.90	13,228,597.21	1,787,286.69	Health				
					Accident				
United States Fidelity and Guaranty, Baltimore, Md.	2,000,000.00	8,454,686.80	5,598,005.49	856,681.31	Health	161.00			
					Liability	35.00			
					Workmen com.	204.46			
					Fidelity	3,288.25		243.20	
					Surety	2,149.85	6,840.66		243.20
Totals	\$24,850,000.00	\$133,536,130.79	\$92,063,862.17	\$16,622,268.62	Burglary, theft	1,002.10			
					Accident	\$57,889.02	\$57,889.02	\$23,763.19	\$23,763.19

SUMMARY OF NEVADA'S FIDELITY AND CASUALTY BUSINESS FOR 1914

	<i>Premiums</i>	<i>Losses</i>
Accident	\$25,234.30	\$8,395.19
Health	6,074.48	2,259.48
Fidelity	6,418.89	3,862.32
Surety	6,197.24	1,584.58
Liability	374.24	4,205.73
Burglary and theft.....	1,308.47	43.42
Workmen's compensation.....	368.72	-----
Sprinkler.....	131.25	166.09
Auto and teams	30.00	2.75
Plate glass	997.18	363.70
Steam boiler.....	284.47	435.75
Fly wheel.....	195.00	-----
Physicians' defense.....	105.00	-----
Totals	\$47,719.24	\$21,308.99

STATE OF NEVADA

BIENNIAL REPORT

OF THE

NEVADA STATE POLICE

1913-1914

J. P. DONNELLEY
Superintendent of State Police



CARSON CITY, NEVADA

STATE PRINTING OFFICE . . . JOE FARNSWORTH, SUPERINTENDENT
1915



BIENNIAL REPORT OF NEVADA STATE POLICE

HEADQUARTERS NEVADA STATE POLICE,
CARSON CITY, December 1, 1914.

To His Excellency, TASKER L. ODDIE, Governor of Nevada.

SIR: I have the honor to submit my report of the operations of the Nevada State Police, from December 31, 1912, to December 1, 1914.

At present the regular force is composed of six members, as follows:

The Superintendent,
The Inspector,
Four Sergeants.

The personnel of the organization is of a high standard, the men being very efficient, their experience, training, and knowledge of the laws especially qualifying them for the duties required of them by this department.

The question of politics is eliminated from the department. The members have retained their positions through their individual capabilities and character regardless of their political affiliations. I believe this policy is conducive to far greater efficiency and should be continued. No member of the Nevada State Police should be displaced for political reasons. The law prohibits them from participating in politics, but it does not guarantee them immunity from removal to permit the appointment of political favorites in their stead.

There are no inactive reserves carried on the rolls. Owing to the reduced number of men on the force, and the volume of work required of the department, I have found it necessary at various times to appoint additional men as active reserves. Of this class, four are at present on the rolls.

The office work of this department has assumed such proportions as to require the continual services of the entire regular force. Our large accumulation of criminal records is steadily increasing. As the records are received they must be compared for identification, copied, indexed, and filed. Photographs, measurements, finger-print impressions, and general descriptions are taken of all convicts committed to the Nevada State Prison. These records must be recorded, indexed, and compared for identification. The efficient handling of this class of work requires a special course of instruction, constant study, and consistent application to the subject. I am pleased to say that the members of this force have demonstrated their ability for handling these records by showing marked facility in the work.

Bertillon, finger-print, anatomical, and lost and stolen property systems are used by the Nevada State Police Department in its bureau of criminal identification.

This bureau has become a valuable acquisition to the State. It is now practically a central bureau of criminal identification and information for all important police departments west of the Rockies. We receive a majority of the records of convicts and known criminals

from the principal centers in the West. We are affiliated with the National Bureau of Identification at Washington, D. C., and also exchange records with the Criminal Identification Bureau of the United States Department of Justice at Leavenworth, Kans. These bureaus furnish us with the records of professional and habitual criminals of the Eastern and Southern States, thus making the chain of identification complete.

EVERY CONVICT MEASURED

The department takes a Bertillon measurement, photograph, finger-print impression, and anatomical record of each convict confined in the Nevada State Prison. We have measured 196 convicts, and copies of these records were sent to all our exchanges, with the object of determining if any of them had previous criminal records. Of the above number, we received information that 49 of them had been previously convicted, and that the aggregate of terms served by them was 73 in other prisons before passing through this department.

Criminal identifications made by this department for outside officers and departments through our exchanges run well up into the hundreds.

It can readily be seen that the habitual criminal is less inclined to operate in our State, where he knows, if arrested, his identity will be discovered, and a conviction would result in a long term in the penitentiary. Further, should he have served three or more terms, under our Habitual Criminal Act he could receive a life sentence. Consequently, the confirmed criminal element will seek other districts where there is less certainty of detection.

STATE SAVES MONEY

This department is the means of saving the State a considerable amount of money by thus eliminating the criminal element, for it is a well-known fact that criminal trials are enormous consumers of the taxpayers' money.

No system of criminal identification is of value unless it has been approved by the highest authorities. The test of the best method is the departments which use it, the authorities who approve it, and its practical value in operation. The Bertillon and finger-print systems are used throughout the civilized world. Neither system has ever failed in any of the tests. For example, I will quote later on a few of the important cases, some of which have come under my personal observation.

Every person handled in our department must be recorded so accurately that we can prove, beyond the shadow of a doubt, whether or not a certain prisoner was in our custody at a certain time, after the lapse of any number of years. We require this for our own protection; if we do not do it, the public will charge us with negligence.

MUST BE STANDARD

Any system of recording prisoners used by a police department must be standard; that is, it must be a system used by all other police departments all over the country. This makes the interchange of information between departments easy, and eliminates delay and uncertainty in handling suspects. We have the following branch bureaus established in this State: Reno, Tonopah, Goldfield, Elko, Winnemucca, and

Ely. Reno, being the most active of these, is productive of greater results, as no system of recording criminals is of value unless used.

Within the last three years 17 convicts have made their escape from either the State Prison, the Road Camp, or the Prison Farm. With the exception of a few that were captured with the assistance of the Warden before they were able to leave the State, this bureau, with its system, has returned all but 3.

BERTILLON SYSTEM

The Bertillon system was invented by Dr. Alphonse Bertillon of Paris, France, born in 1854 and died in 1914. The system was introduced into the United States in 1887 by Major R. W. McClurg, late General Superintendent of Police of Chicago, then Warden of the Federal Prison at Leavenworth, Kans., now retired.

Up to the time of his death M. Bertillon was the chief of the entire judicial identification service of France. It is now in use in all police stations, jails, and penitentiaries of France. It has spread to almost every civilized country on the globe. The Bertillon system is divided into three parts: Part one, the physical measurements, of which there are only eleven; Part two, the general description of the prisoner, including his photograph; Part three, a record of scars and peculiar marks, such as tattoos, deformities, etc.

THE LOST AND STOLEN PROPERTY SYSTEM

Nowadays the up-to-date police department seeks to serve the public by anticipating the demands made upon it. The use of a system for keeping track of lost and stolen property protects a department in that it keeps the department advised of the pawnshops and second-hand dealers, where crooks attempt to dispose of stolen goods. It protects the bureau from the critic who is always attempting to show that the police department is negligent in its duties, and also from the fakir, the man who claims he has been robbed merely for the purpose of notoriety.

Should a citizen report that his watch has been stolen, he supplies the department with the case and movement numbers, and by referring to our lost and stolen property system we can tell at once whether any watch of that number has been received at any pawnshop in the cities where the police departments exchange with our bureau. By forwarding the number to the police departments of other cities, each one is in a position to restore same to its rightful owner.

FINGER-PRINT METHOD

No police department can tell just when it may be called upon to solve a criminal mystery.

The finger-print system is being more widely adopted every year. It is not only valuable as an identification system, but it plays a prominent part in the detection of criminals; it has frequently led to the arrest and conviction of criminals, when, but for the finger-marks left by them at the scene of the crime, no clue of any kind would have been discovered as to the perpetrators.

Professor Francis Galton, the well-known English scientist, has demonstrated that the average finger-print possesses about 700 points of

comparison. He also demonstrates, as the result of his investigations on this subject, that the variability of finger-prints among different people is so great that the chances of there being two individuals in the world having finger-prints exactly identical is just 1 in 64,000,000. This will make it clear to you how impossible it is for there to be two finger-prints recorded exactly alike.

Mr. Galton has discussed the all-important question of persistence, and has proved that the details of the ridges constituting the patterns of finger impressions persist throughout the whole period of the life of a man; those found on the fingers of the new-born infant being traceable on the fingers of the same person in old age, and apparently effaceable only when, after death, decomposition sets in.

A FEW IMPORTANT CASES

There have been in the past years many cases wherein finger-prints have greatly assisted the police in solving what at first appeared to be mysterious crimes. Oftentimes the finger-print evidence was entirely responsible for the conviction of the criminal.

On January 15, 1909, while several members of this department were in Reno on other business, a report was received at the police station stating that the office of the United Fence Company had been burglarized. Chief of Police Burke requested the assistance of the State Police.

After carefully searching the office it was found that the safe had been opened with the aid of dynamite. The burglar had used a pair of cotton gloves while working on the safe and no finger-prints had been left thereon. However, when the job was completed, not wishing to be caught with the gloves smeared with soap and glycerine in his possession, he discarded them before leaving the office. In making his exit through a window he placed his hand on the sill and his finger-prints, which remained there, were secured and photographed by this department.

Jerry Harrington, an ex-convict, was suspected of the crime, and when his finger-prints were taken and shown to him, together with the prints taken from the window-sill, he realized the uselessness of fighting the case, and pleaded guilty. The finger-prints were all the evidence needed to convict and save the county the expense of a trial.

THE CASE OF CHARLES CLARK

As is well known, the finger-print system is a positive means of identification. The case of Charles Clark, Nevada Convict No. 1007, is worthy of note in this regard. This man attempted to escape jail in Esmeralda County and was sentenced to a term of 10 years. He was received at the State Prison on October 22, 1908, and was paroled January 1, 1911, on condition that he report by mail each month to the Board of Pardons. He reported regularly from New York City.

In January, 1912, we received some finger-prints of men confined in the Bakersfield (Cal.) jail on various charges, among them being one of a man who refused to give his name. We immediately identified this man by his finger-prints as Charles Clark, on parole from the Nevada State Prison, but, notwithstanding this fact, a report was received from New York on the 1st of the following month, signed by Charles

Clark. We notified the Bakersfield authorities to hold Clark, and he was eventually returned to the State Prison. The finger-prints established positively that Clark was in Bakersfield. From there he forwarded his reports to New York, where they were remailed by another party.

VINDICATES AS WELL AS CONVICTS

In the month of April, 1911, we received a request from Sheriff George McAuley of Auburn, Cal., for a photograph and description of H. F. Bremer (No. 1258), who had recently been released from the Nevada State Prison, and who was suspected of murdering Thomas Raffleton in Placer County, California. We circulated photographs of Bremer and requested all Nevada officers to arrest him if in their locality.

On May 11, 1911, we received a letter from Sheriff Lamb of Winnemucca, Nevada, with an inclosed photo and finger-print impression of a party whom he suspected was Bremer. The photo bore a very close resemblance to Bremer, but, on comparing the finger-prints, we immediately telegraphed to Sheriff Lamb that the man under arrest was not the man wanted. In this case the finger-prints were the means of securing an innocent man's release, although he very closely resembled the man wanted, and under ordinary circumstances would probably have been held in jail an indefinite time awaiting identification and might possibly have been held for trial.

FINGER-PRINT CATCHES HIM

Nellie Quinn, who was murdered in her room, 431 West One Hundred and Eighteenth Street, New York, early in 1908, presented a baffling case until a whisky bottle was found that held finger impressions. George Kramer was arrested for the crime some time after, and his finger-prints corresponded to those on the bottle. He confessed to the crime when confronted with the evidence.

On September 19, 1910, Clarence B. Hiler, who lived at 1837 One Hundred and Fourth Street, Chicago, was murdered in his home, evidently by a burglar. The following morning Captain Michael Evans and his son, William M. Evans, of the Chicago Bureau of Identification, went to the Hiler residence to look for finger-prints. They found three on a newly painted porch railing. The rail was taken off and taken to headquarters, where the prints were photographed.

Certain circumstances pointed to a negro named Jennings as the murderer, and he was arrested and his finger-prints taken. They corresponded exactly to those found on the porch rail. Jennings was brought to trial before Judge Marcus A. Kavanaugh at Chicago, and was convicted on November 11.

Jennings's attorney fought against the admission of finger-prints as evidence and argued that as a means of identification finger-prints were unsubstantial. He was overruled by Judge Kavanaugh, and five experts testified to many points of similarity that existed between the prints found on the porch rail and those taken from Jennings's fingers.

The case was taken to the Supreme Court of Illinois on appeal, but the verdict was upheld. In handing down their decision the Justices of the Supreme Court said: "When photography was first introduced, it was seriously questioned whether pictures thus created could prop-

erly be introduced as evidence. But this method of proof, as well as by means of the X-ray and microscope, is now admitted without question. We are disposed to hold, from the evidence of the four witnesses who testified, and from the writings we have referred to on the subject, that there is a scientific basis for the system of finger-prints in identification, and that the courts are justified in admitting this class of evidence. Such evidence may or may not be of independent strength, but it is admissible, with other proof, as tending to make out a case. If the inference as to the identity of persons, based on the voice, the appearance, or age is admissible, why does not this record justify the admission of finger-print testimony under common-law rules of evidence?"

Jennings was hanged on February 16, 1912, at Chicago.

The higher courts of nearly every nation have decided that finger-print evidence is admissible. On May 23, 1912, the Federal Court of Australia, sitting at Melbourne, upheld the conviction of a burglar whose guilt was established by finger-prints alone.

One becomes an expert only after continual practice and study in taking prints under varied circumstances and in detecting impressions left by criminals at the scenes of their crimes.

ARMY AND NAVY USE FINGER-PRINTS

"WASHINGTON, D. C., December 29—Burning his finger-tips with strong acids failed to enable a deserter from the Marine Corps to successfully pass the scrutiny of the finger-print experts when he tried to enlist in the navy. The blurred lines of the finger-pads aroused suspicion; a special effort was made to read the lines, and in the end the man was identified by comparison with one of the records in the Navy Department."

The finger-prints found on the glass frame from which Mona Lisa (La Gioconda) was stolen in the Louvre tally exactly with the anthropometrical record of Vincenzo Perugia at the Prefecture of Police in Paris and established his guilt beyond a doubt. He afterwards confessed to the theft. Perugia had served two terms in prison, one for theft and one for violent assault.

Police Commissioner Waldo of New York has announced that he would recommend to the Secretary of Commerce the taking of finger-prints of all immigrants entering this country.

CHARACTER NOT TOLD

The question is often asked: "Can character be told by finger-prints?" The answer is: "It positively cannot be."

Sir Francis Galton, during the twenty years he studied finger-prints, took impressions from the fingers of every conceivable class of people. He took impressions from the highest statesmen down through the middle classes, laborers, school children, and finally to the idiots at Dorent's Asylum, London.

Sir Francis always made it a point to assure every one who asked him that, as far as the ridges upon their finger-tips were concerned, the idiots resembled the most intelligent statesmen.

Galton has taken excellent finger-prints from the bodies of persons found drowned that were absolutely unrecognizable in every other respect. He and many others have made experiments upon different

individuals to cover this point of the persistence through life of the ridges, and have settled it beyond argument by thousands of examples.

ANATOMICAL SYSTEM

A brief explanation of how the anatomical system operates will explain what may seem to be a mystery to citizens.

A citizen reports to the police that his pocket has been picked or his watch stolen by an individual who had a scar on the left side of his face. We would at once refer to our anatomical index. This is a card system divided into sections for the different parts of the body, such as the head, and then into subdivisions, such as the face. We would find cards for all prisoners or criminals handled by our department who might bear scars on the face.

Assuming that a crook bearing a scar on his left cheek had passed through our department at some time in the past, we would make out for this man a five- by four-inch card. This would be indexed under the head, and subindexed under the face. When we receive the complaint from the citizen whose pocket has been picked we refer to our anatomical index and locate this card. This would enable us to refer to the man's complete record and photograph. This would also enable the citizen to identify the man promptly.

TRACING THE MARKS

A separate card is made out for each deformity or peculiarity. Assuming that the prisoner or criminal, John Doe, had three points about him that could be recorded—a scar on the left side of the face, the missing first joint of the left little finger, and bow legs; the first card, the one for "Scars on face," bears also a notation, "See little finger," and "See legs." This card, after being made out, is filed in the "Head" section of the index, behind a guide marked "Left side head." The second or middle card is made out for "Bow legs." It also bears cross-reference to "Left cheek" and "Left little finger." This card would be filed under the section for "Legs." The third, or upper, card is made out for "Little finger—first joint missing," and would be filed under section for "Left hand."

Thus, with each one of these cards filed in a different section, they bear cross-references, so that no matter which one is turned to first it will lead you to the others.

This system is an essential part of the Bertillon system inasmuch as the marks and scars are recorded on all Bertillon cards at the time the Bertillon measurements are taken, and therefore help to verify the Bertillon identification.

SMALL MOLE REVEALS CRIMINAL

In some ways it supplements the Bertillon system. For example:

A man was arrested in Oakland, April 21, 1913, who had committed over fifty burglaries around the Bay since December, 1912. He stoutly maintained after his arrest that he had never been in prison. We received his photograph among other exchanges. He was identified by this department as an ex-convict who had served a sentence in the Montana State Prison.

The identification was made through his having a very small mole near the left side of his mouth. Taking into consideration that we

have upwards of 100,000 photographs in our gallery, this identification will demonstrate the value of this system.

As a great many criminals are tattooed, it often aids the officers in their work of identification. Criminals, knowing this, often change the design, thinking that by so doing they may escape being identified by the officers. They do not succeed very well, as the following will illustrate:

TATTOOING MARKS CHANGED

A criminal by the name of George C. Faber, alias Red Leary, whose description was first received by this bureau, bears the design of an athlete on his breast. Later we received a description of a man wanted under the name of James Edwards, tattooed with the design of Christ on the cross, which we identified as George Faber, alias Red Leary. He had changed the tattooing by having a cross placed behind the athlete and printing a crown of thorns on him, thereby changing the athlete to Christ on the cross.

The following will give you an idea of mottoes used by some of the worst criminals which are on file in this department: "Remember the Maine," "In memory of my cruise to the Orient," "Death before dishonor," "Angels at rest," a baby in a bathtub with the word "Dada," clasped hands (which seems to be the most numerous), "Jack's last port," a tombstone, "War is hell," "Faith, Hope, and Charity," "In memory of my dear mother," "In memory of my dear sister."

THE ROGUES' GALLERY

The "Rogues' Gallery" means a collection of photographs mounted in racks or frames, so they can all be displayed before the officers to study and scrutinize the faces of people who are actually wanted and those who may be wanted in the future. Another use of the Rogues' Gallery is for assisting the public to identify offenders. For example, if a citizen has been the victim of an assault by an unknown man, he can go to the police department and by looking over the Rogues' Gallery photographs can find the man who committed the offense.

We have a great many thousand photographs of the criminal element in this department, and they are all kept in most accessible manner, and when not in use can be locked against unauthorized examination.

The department has a complete photographic outfit, consisting of camera, chair, screens, flashlight, and other supplies. We do all of our own photographic work. Some police departments have their photographs made for them by outside photographers, which is very unsatisfactory and expensive. Also, it is hard to get a professional photographer to make a good Bertillon photograph, as they are more interested in making the picture flattering than in accurately reproducing the aspect of the prisoner. Some departments pay from \$25 to \$30 a month for this service. By doing the work ourselves it is far less expensive and we secure a far better photograph for our purpose, as we make a study of the nose, ear, and the facial expressions. Therefore, it is necessary to have all the characteristics.

TAKING THE PICTURE

By means of an electric flashlight, which is a part of every Bertillon outfit, daylight is not essential. This means that photographs of pris-

oners can be taken at any hour of the day or night, and that every photograph made will be absolutely uniform in illumination.

When the camera has been focused, camera, chair, and flashlight are fastened permanently to the floor. Once the focus is established, no refocusing is necessary. This means an immense saving in time in the taking of photographs. Members of this department are thus enabled to make a correct Bertillon photograph better than a professional photographer.

This department also keeps a record of the dates of discharged, paroled, and pardoned convicts of the Nevada State Prison, and we keep all the Sheriffs in the State advised as to their records. This department furnishes the Board of Pardons with the criminal records of convicts who apply for clemency. It is of material assistance to the board, as the character of the convict can readily be determined by referring to these records.

DISCOVERY INEVITABLE

A very considerable part of the crimes and wrongs that disturb the order of society result, either directly or indirectly, from the apparent impossibility of distinguishing in every case with unerring certainty one individual from another. It is for this reason especially that many of the professional and habitual criminals who abound in every land have hitherto gone "unwhipped of justice."

Men would be unlikely to render themselves liable to penalties of the law if they knew that, wherever they might flee, their identity could not fail to be discovered.

The systems of identification now used will not only have the effect of deterring crime in general, but will nullify attempts at substitution of persons. No impersonations of a pensioner, or a missing heir, or a business man could ever hope to be successful, and it can be applied, not only to the living person, but to his dead body, even when crushed, mangled, or dismembered beyond the recognition of his nearest friend or relative. The life insurance companies could not be robbed under cover of the pretended death of the holder of a policy, as has been so often done in the past. It prevents those who fall on the field of battle from being buried in nameless graves.

As it is now, improved and developed with the aid of so many years of practical experience, the system has reached a high degree of perfection, and its absolute efficiency is recognized by all competent authorities throughout the world who have investigated its character and its history.

STATISTICS ARE VALUABLE

The statistics that show the criminal trend, and especially the course the stream takes, starting in the home and ending in disassociation absolute and perpetual from what is normal in life, have a value even when they are far from accurate, as studied in the light of the following facts:

With the character of deficient mentality, the environmental influence of poverty and criminal associations is very likely to produce criminality in the offspring; but it must be distinctly remembered that this criminality is not an inherited factor, but a secondary result of other conditions. The child is born helpless and dependent. Let society fail to train the individual to a cheerful obedience to all proper

authority and it begets an egotist, fosters an anarchist, and develops a criminal.

The home, the church, the school, the playground, and the government are the fundamental institutions for molding the destiny of the race.

THE MONEY COST OF CRIME

According to the tables of statistics compiled by Harry C. Hammond, who has been at work for seven years completing the same from official figures, and which are the most complete in the country outside of the Census Bureau, and more nearly up to date than the Federal figures, crime last year cost California \$3,753,471.

Hammond takes the view that the total cost of crime direct and indirect is not far from twice that amount.

SPECIAL DETAILS

The special details of members of this department, outside of Carson City, amounted to a total of 82 days in 1913, and 568 days in 1914, totaling 650 days for the two years.

These details were occasioned by the necessity of investigating and arresting stock rustlers, enforcing the antigambling laws, acting as game wardens, and the pursuit of escaped convicts from the State Prison.

DAYS OF SERVICE

Our orders show that out of a total of 3,358 working days throughout the two years, 34 days were lost on account of sickness, and 88 days through furloughs, leaving the net working days as 3,236, of which 650 were on special details outside of the office.

WORK ACCOMPLISHED

Our records show that during the two years we have identified 488 criminals through this bureau; 19,765 records and circulars have been mailed from this office. We have indexed and filed 4,097 lost or stolen articles, and it would be impossible to state the number or value of the property thus returned to the rightful owners. We have received 25,443 records of criminals from other police departments or prisons, all of which have been indexed and filed.

PRINTING

Our large accumulation of records necessarily require considerable printing. This work has been done at the State Printing Office, and I wish to express my appreciation of the unvarying courtesy, exceptional promptness, and skilful workmanship with which our requests for service have been met with by that department.

STATEMENT OF ACCOUNT OF APPROPRIATIONS

January 1, 1913, to November 30, 1914

Balance of regular appropriation.....	\$59,319.86	
Balance of special horse appropriation.....	2,462.00	
Appropriated in 1913.....	12,500.00	
		<hr/>
Expended in 1913.....	\$16,433.42	\$74,281.86
Expended in 1914.....	17,740.40	
		<hr/>
		34,173.82
Balance.....		<hr/>
		\$40,108.04

RECAPITULATION

	1913	1914
Expenses.....	\$1,280.61	\$1,780.80
Salaries.....	13,722.35	14,790.55
Transportation.....	471.30	388.55
Police equipment.....	96.50	49.90
Identification equipment.....	151.97	565.50
Supplies.....	710.69	165.10
Total for two years.....		\$34,173.82

The expenses for the two years are further subdivided as follows:

POLICE

Expenses in 1913.....	\$2,191.39
Expenses in 1914.....	2,136.80
Salaries for two years.....	28,512.90
	<u>\$32,841.09</u>

IDENTIFICATION

Expenses in 1913.....	\$519.68
Expenses in 1914.....	813.05
	<u>1,332.73</u>

Total.....	\$34,173.82
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INVENTORY

46 Winchester carbines at \$13.80.....	\$634.80
17 Krag carbines at \$5.25.....	89.25
43 Colt's revolvers at \$11.20.....	481.60
6 Smith & Wesson revolvers at \$15.75.....	94.50
12 automatic shotguns at \$18.50.....	222.00
	<u>\$1,522.15</u>
25 pairs of handcuffs at \$4.75.....	\$128.25
6 leg irons at \$7.....	42.00
1 Oregon boot at \$11.....	11.00
32 twistlers at \$1.....	32.00
96 stars at 48 cents.....	46.08
7 Flammarion binoculars at \$23.....	161.00
1 set signal flags.....	44.90
1 storm flag and halyard.....	5.10
	<u>470.33</u>
3 horses.....	\$435.00
3 saddles.....	144.00
3 bridles and bits.....	29.55
2 pair chaps.....	33.50
2 pair spurs.....	11.00
3 saddle blankets.....	16.00
2 riding coats.....	15.00
	<u>684.05</u>
9 Bertillon filing cabinets.....	\$749.15
2 finger-print filing cabinets.....	80.50
2 voucher sections.....	29.80
5 No. 29 5x3 sections.....	47.50
2 No. 5 sections.....	29.00
4 No. 59 vertical letter sections.....	66.90
3 No. 32 6x4 sections.....	28.50
1 6-drawer section, 6x4.....	19.00
2 Shannon file sections.....	37.40
3 No. 12 top.....	11.25
1 No. 106 base.....	6.55

2 photo cabinets and base.....	\$151.00	
40 photo frames.....	260.00	
1 anatomical cabinet.....	40.00	
Guides and index cards.....	404.40	
1 shelf section.....	6.05	
1 3-drawer section, 8x5.....	9.50	
Storage cases and transfer files.....	83.00	
1 scale, Bertillon measurements.....	30.00	
Measuring board, stool, and stand.....	146.00	
Measuring instruments and eye chart.....	40.25	
1 camera and stand.....	108.20	
2 screens.....	30.25	
1 chair.....	13.75	
Flashlight apparatus.....	57.50	
Trimmer and punch.....	8.45	
Finger-print apparatus.....	10.00	
Darkroom lamps and trays.....	15.00	
	\$2,518.90	
4 roll-top desks.....	\$197.50	
1 typewriter desk.....	40.00	
2 typewriter chairs.....	12.50	
3 office chairs.....	19.50	
4 arm chairs.....	9.00	
1 office stool.....	7.50	
1 stationary desk.....	10.00	
	296.00	
3 Remington typewriters.....	\$280.00	
1 "D" carriage and platen.....	32.50	
1 card platen.....	7.50	
1 card cylinder.....	4.00	
1 multigraph.....	261.35	
Multigraph type.....	17.80	
1 multigraph ink attachment.....	10.00	
1 addressograph.....	55.00	
1 duplicator.....	11.50	
2 numbering machines.....	21.30	
	700.95	
7 post binders and insertions.....	\$91.50	
1 loose-leaf ledger.....	25.00	
14 text-books.....	10.00	
13 gum-stub files.....	20.35	
1 invoice book.....	4.00	
	150.85	
Electric fixtures.....	\$41.71	
3 coal stoves.....	39.00	
Linoleum and curtains.....	218.50	
1 oil stove.....	4.00	
Mirror and water cooler.....	11.50	
1 filter.....	3.50	
Maps, wire trays, ink wells.....	23.00	
Clip fastener and punch.....	6.03	
Rubber stamps and holders.....	50.00	
Metal-bodied type.....	8.80	
	406.04	
8 flash lamps.....	12.00	
Total	\$8,761.27	

EXPENDABLE ARTICLES

In addition to the above there is on hand at the present time an assortment of caps, overcoats, heavy blouses and riding trousers, and leggins, all of which have been issued to, and worn by, former members of the department; about 20,000 rounds of ammunition; four tons of coal; and an assortment of tools and implements, used in the care of the building, the grounds, and the harness-room, all of which have seen such service as to render their value nominal.

RULES AND REGULATIONS

The following rules and regulations, for the government of the State Police Department, have been issued in book form and designated the Police Manual:

All members of the Department will be furnished with a copy of this Police Manual and it shall be their duty to become familiar with the contents thereof, that they may thoroughly understand all the rules, regulations, and instructions therein contained, and conduct themselves accordingly.

Any member of the Department shall be subject to reprimand, suspension from duty, fine, or dismissal from the force, according to the nature and aggravation of the offense, for any violation of the rules and regulations.

The essential requisites of a good police officer are honesty, sobriety, courage, intelligence, good morals, good temper, promptitude, impartiality, and pleasant address.

GENERAL ORDERS NO. 1.

1. Until further orders members of this Department will, unless otherwise directed, report to these headquarters not later than 8:30 a. m. of each and every working day, at which hour office work will commence. One hour will be allotted to each member for lunch. Unless necessity demands otherwise, office work will cease at 4 p. m., at which hour, when deemed necessary, thirty minutes will be devoted to physical exercise, drill, or instructions pertaining to the duties of this Department, to be designated by the Inspector.

2. The Inspector will have charge of all office work, excepting the accounts and correspondence, which will be under the immediate supervision of the Superintendent, except in the absence of the Superintendent, when the Inspector will also supervise this department. On the last day of each month, the Inspector will report in writing to the Superintendent the number and disposition of records received during the month, and the progress made in handling the same. Should there be any accumulation of records not disposed of, he will state the reason therefor in said report.

3. Members of this Department will make a written daily report to the Inspector, covering their individual operations, and will affix their individual initials to all work passing through their hands. These reports will be turned in to the Superintendent with the Inspector's monthly report. Members of this Department when on detached service will make a written daily report to the Superintendent. When not practicable to send in each day, the reports may be embodied in a weekly report, but in no case will the reports be withheld more than one week.

4. No article of equipment will be taken from the Headquarters building except by permission of the Superintendent or, in his absence, by permission of the Inspector, when a receipt will be taken for same and turned in to the Department clerk, who will enter the same on the Department records. Upon the return of said articles, the receipt for the same will be relinquished to the signer, and the clerk will check the records accordingly.

5. Hereafter members of this Department desiring to leave headquarters

during working hours, will obtain permission from the Superintendent or the Inspector. Should any member desire to leave Carson City, permission for so doing will be obtained of the Superintendent or, in the event of his absence from headquarters, of the Inspector.

6. Members of this Department being unable, on account of illness or other unavoidable cause, to report in person at the specified hour to these headquarters, will notify this office accordingly and will report each morning while so absent.

7. When supplies of any kind are needed, a requisition will be filed with the Superintendent or, in his absence, with the Inspector.

8. All orders, general and special, and all correspondence will be signed by the Superintendent or, in his absence from headquarters, by the Inspector.

9. Members of this Department while in charge of quarters on Sundays or holidays will remain at headquarters the entire day except when relieved for lunch, unless given permission to leave by the Superintendent or Inspector.

10. Members will refrain from unnecessary conversation while working on records, as it would be liable to cause mistakes, in which case the records would be faulty and of no value to the Department.

11. Members detailed for mounted service will see that their equipment is at all times in order and available for immediate service and they will attend to feeding and exercising the horses promptly, at such hours as the Inspector shall direct.

12. It shall be the duty of the Inspector to immediately report to the Superintendent all disobedience of orders.

13. All orders in conflict herewith are hereby revoked.

The following rules and regulations are for the guidance of the members of this Department:

RULE 1

Members of this Department, except officers, shall be known and indicated as policemen. Policemen on duty will be considered as sentinels on post; and must conduct themselves accordingly.

RULE 2

All orders of superior officers must be cheerfully and promptly obeyed and enforced, and it shall be the duty of all superior officers of the Nevada State Police to report any and all violations of regulations herein set forth, which may come to their knowledge, to the Superintendent. Conduct unbecoming an officer and offenses against the rules and regulations of the Department will subject the offender to discipline by the Superintendent of the Department and to such punishment as in his judgment may be deemed proper under the law.

RULE 3

SECTION 1. All members of the Department shall devote their whole time and attention to business of the Department and not follow any other calling, and although certain hours are allotted to each man's duty on ordinary occasions yet all members must be prepared to act at a moment's notice whenever their services may be required.

SEC. 2. The prevention of crime being the most important duty of a police officer, he must to the utmost of his power prevent the commission of assaults, breaches of peace, and all other crimes about to be committed.

SEC. 3. Punctual attendance, prompt obedience and conformity to the rules of the Department and orders of superior officers will be rigidly enforced.

SEC. 4. Each member must refrain from harsh, violent, coarse, profane, or insolent language, and when required he must act with firmness and sufficient energy to perform his duty.

SEC. 5. Officers of the Department must not lounge or loaf in or around saloons, barrooms, or places where intoxicating drinks are sold. No liquor or intoxicants shall upon any pretext be introduced in the Headquarters, and

officers found in a state of intoxication, whether on duty or not, or who shall be found asleep during the hours of duty, shall be subject to dismissal or such other punishment as the Superintendent may direct.

RULE 4

Regular officers at all times shall carry a revolver or pistol and when on duty at night shall carry a pocket electric light of a design to be selected by the Superintendent.

RULE 5

SECTION 1. All members of this Department are prohibited from making assertions or using language tending to discredit or reflect upon the integrity of any officer belonging to the Department. All complaints must be reported in writing to the Superintendent, when action will be taken thereon.

Sec. 2. An indulgence in the practice of scandal and the relating of rumors affecting the character of a brother officer tends to lower the Department in the public estimation and creates ill-feeling and animosity among the members, and, as it tends directly to subvert good discipline, therefore it will render the party offending liable to dismissal.

Sec. 3. Each and every member of the Department shall report in writing each and every fact and circumstance and all information of which they become possessed in any manner whatsoever which might reflect discredit on the Department or any member thereof.

RULE 6

No member of the Department shall communicate, except to such persons as directed by his superior in office, any information respecting orders he may have received or any regulations that may be made for the government of the Nevada State Police force.

RULE 7

It will be considered a cause for dismissal from the force for any member of the Department to request their friends to importune the Superintendent to grant special privileges to any of said members. No member of the police force shall take any active measures in any proceedings to appoint, promote, suspend, disrate, or dismiss any member of the Department except at the request of the Superintendent.

RULE 8

All police officers are required to give their name and number of star when requested by citizens.

RULE 9

No officer shall receive as a present from any person conducting a business upon his beat, any article of goods taken from the stock of goods sold by such person.

RULE 10

Police officers are prohibited from being members of any political nomination convention and from taking any part in politics, except to cast their individual votes for such candidates as they may prefer.

RULE 11

All officers are directed to keep a memorandum book and enter therein and report to their superior officers, the names of all suspected or convicted persons whom they may have a memorandum of, together with the time and place when seen, also such matters of importance as may be necessary to report.

RULE 12

Upon making an arrest officers must carefully search the party or parties and take from them any and all weapons or articles with which they might injure themselves or others. The search should be made in the presence of witnesses if possible; thereby the officer will be protected. After taking away any weapons found on the party arrested, officers must at once take the party

or parties arrested to the nearest jail and assist the jailer in searching their clothing for such articles as may be designated by said jailer.

RULE 13

SECTION 1. Every officer must be neat in his dress and appearance, must be civil and respectful to the public, and upon all occasions perform his duties with good temper, discretion, and firmness.

SEC. 2. It is the duty of policemen to keep all prisoners safely, but they have no right to punish them. Officers must not use language calculated to offend or provoke them.

RULE 14

SECTION 1. Members of the Nevada State Police shall be required to attend at drill at such times and places as may be ordered by the Inspector or the Sergeant commanding the detachment, and they must obey all lawful commands of the drill instructor.

SEC. 2. Members of the Department shall be required to report for target practice at such times and places as may be ordered by the Superintendent or their respective commanders. A record shall be kept by the Sergeant or officer in command of detachment of the scores made by each individual and the Superintendent shall be furnished with a copy thereof monthly.

RULE 15

SECTION 1. Every officer must recollect that, in making an arrest, he is not justified in using more force than is actually necessary for the safe custody of the parties until he conveys them to their proper destination. Officers who make an arrest are directed to be prompt in attendance at the next session of the police court.

SEC. 2. A policeman must be cautious never to interfere unnecessarily, but when required to act, he should do so with decision, discretion, and boldness. He shall arrest any one who opposes him in the discharge of his duty.

SEC. 3. Officers are prohibited from loaning money to prisoners on deposit of any articles in their possession or purchasing any property in the possession of prisoners.

In case martial law is declared, the articles of war of the United States Army will be in force.

The foregoing orders and rules will be rigidly enforced, and if any section is not thoroughly understood inquiry regarding the same will immediately be made of the officer in command.

WHAT WE SHOULD DO IN ORDER TO LESSEN THE PERCENTAGE OF CRIME

We should take care of our incorrigible boys and girls, from the streets of our cities and towns throughout the country.

I consider that the time spent trying to reform the confirmed criminal is time thrown away, as the habitual criminal has had the opportunity to make good after serving his first term, and failed; but we can make self-supporting and self-respecting citizens of incorrigible boys and girls taken from the streets of our cities and towns.

Those placed in charge, or who have supervision over reformatories or schools should be people of strong character, discretion, sympathy, and good sense. At no stage of a boy's career will he be benefited by contact with a weak or tearful sentimentalist. He needs strength instead of tears, opportunity more than advice, direction instead of delicacies. He needs a chance and help to make of himself a man among men, and any coddling might be fatal to his final success.

Formerly all delinquent children who became wards of cities or States were sent to prisons in which adult offenders of both sexes were

confined. They lived in idleness and were under degrading tutelage. It was inevitable that society, which for the time being protected from their petty depredations, was preparing them for lives of crime.

It was to correct this shameful and vicious system that juvenile asylums were established. Primarily our purpose is to protect society temporarily from mischievous or malicious tendencies of these boys to lay waste or lay hold upon the property of others. Society has long since ceased to be vindictive with the unruly children of this class, and a man is no longer considered a silly sentimentalist who demands that this by-product of our civilization shall not be abandoned and permitted to become a menace, but that it shall be conserved and transformed into a useful asset.

Though we cannot make the idle parents industrious, the thriftless provident, the drunken sober, or reform the habitual criminal, and though we cannot extirpate the evils that are the outgrowth of individual life, we can lay the ax at the root of this evil, so far as these children are concerned, by implanting in them a respect for the decent things of life, thereby largely reducing the percentage of crime.

We are still endeavoring to work out a better plan of life for the boys who come under our care. We are just beginning to realize that proper results cannot be obtained with them without the expenditure of at least as much money as is spent upon every child in the public schools of any great city.

From the streets of New York City has been gathered altogether an army of 24,000 children who have started to travel the wrong road of life. The majority of these children, however, are merely vicariously delinquent. They have been denied fair birth, kind surroundings, and helpful opportunities. These children are little better or little worse than the average. They are, to be sure, poorly nurtured mentally, morally, and physically, but the harm that has been done them can be remedied. The records of the boys who come back to New York City from the institutions that have cared for them show that 72 per cent make a fair success of life; of those sent to homes in the West, 90 per cent make good.

I doubt whether a much better percentage can be shown by the children whose early years are spent with those who give to them every care and thought.

The New York juvenile schools for incorrigible boys have numerous shops in which the boys are taught such trades as carpentering, tinning, electrical installation, painting, wood carving, and mechanical drawing. The boys are taught intensive farming and hundreds of them work individual gardens. They are taught to know and admire nature and to study the growing things. The stress of the city streets has been their undoing.

NEVADA HAS TAKEN A STEP IN THE RIGHT DIRECTION

An Act establishing a state institution for delinquent boys, providing for the purchase of a site, erection of buildings, organizing the government of said school, for the maintenance thereof, and creating a tax levy to raise funds for such purpose, was passed at the Twenty-sixth Session of the Legislature in 1913, and approved on March 26, 1913.

The Governor and four appointees are to constitute a permanent board of control. The ultimate purpose of the instruction, training,

and discipline that they will receive shall be to qualify inmates for profitable and honorable employment and to enable them to lead useful lives after their release from the institution, rather than to make said institution self-supporting.

A special tax of 2 cents on each one hundred dollars of taxable property for two years was levied for the purposes of this Act. Elko, Elko County, was the place selected by the Legislature upon a ten-acre site to be deeded to the State without charge; conditioned upon payment to the commission, by the citizens of Elko, of the sum of \$5,000 to assist in the construction of suitable buildings for such home.

The above stipulation has been complied with by the people of Elko. and the home will be completed soon.

An additional tract of about fifty acres has been secured by the board adjoining this land, so the inmates can be taught farming, gardening, etc.

THE CRIMINAL SCRAP-HEAP

There are tens of thousands of men and women committed to our penal institutions as the scrap-heap of humanity. Now, in reclaiming any scrap-heap, whether of the machine shop or of human society, the first essential is to sort it out, and do the best you can with each assortment, at its own value. But our human scrap-heap, the most costly and complicated scrap-heap in the world, has *never yet been adequately sorted.*

Our local jails, which house two-thirds of our average penal population, and to which some nine-tenths of all actual commitments are made, have practically no classification whatever. Our state institutions, which take care of the rest of the penal population, have extremely little classification. The difficulty is that a very large percentage of our so-called criminal class is not really criminal at all, but merely defective.

What I consider a very bad practice is the jail commitments in default of fines, which result in throwing thousands of young men and women, of legal age or over, into close contact with the most degenerated and depraved jail characters.

At least 300,000 human beings each year, with all their family connections and dependents, are thus needlessly infected with the moral poison of prison life, and their opportunities of honest industrial employment and self-respect needlessly diminished, for the single reason that they could not pay fines imposed by the lower courts for some minor infringement of the law.

In all some 54,000 sentences for minor offenses (fines, or under six months) were given in Massachusetts in 1912. Forty-three thousand paid their fines and went free. Ten thousand more could not pay, and for that reason alone were enrolled among our prison population.

Our first duty should be to prevent our young men and women coming in contact with the confirmed criminal.

In order to accomplish this classification we must have prison buildings and prison colonies or farms in the country adapted for the productive employment of every inmate. We must have reformatories with a similar equipment. We must have industrial schools more adequately equipped to train and employ unruly boys and girls who come under the ban of the law; colonies with educational equipment for the mentally defective; hospital schools; and, finally, homes for the

feeble-minded who have grown old beyond any possibility of productive employment.

THE INDETERMINATE SENTENCE

No matter what improvements are made in prisons and reformatories, they can never accomplish the results desired until the definite sentence is supplanted by the indeterminate sentence, which deals scientifically with the discharge of prisoners. The State of Nevada has recently adopted this system.

No judge can determine, in advance, when a prisoner is fit to return to the community. Probably we are not ready to give to any board the authority to hold a human being permanently in prison, though we do not hesitate to give absolute power to keep persons in insane hospitals until they are believed to be recovered. Therefore the criminal should remain in prison until it is believed that he has ceased to be a criminal and has been sufficiently punished.

Mere passive obedience to ordinary prison rules cannot be accepted as proof that a prisoner is fit for liberty. Often the best-behaved criminal while in prison, returns to crime shortly after being released. We have an object lesson in the case of Burns and McVey, who while in the Nevada State Prison were considered good prisoners, and shortly after being paroled, committed murder in an attempt to rob a store in Salt Lake, Utah. McVey, alias Bakersfield Slim, was picked up in New Orleans as disorderly, under the name of Dick Jones, and was identified as McVey, wanted for violating his parole from the Nevada Prison. The identification was made from his record sent out by the Nevada State Police Bureau of Criminal Identification.

The New Orleans officers notified us of the arrest; we informed them that he was also wanted in Salt Lake for murder, and requested them to hold him until further notice. We then notified Salt Lake. They replied that they would go after him. He was returned, tried, and convicted of murder, and is now serving a life sentence in the Utah State Prison. Burns is still at large.

There should be a system of marking covering every detail of life, requiring of the prisoner his actual cooperation with the prison administration, and constantly testing his character. He should be released gradually, from grade to grade, with increasing liberty until at last he is allowed to go at large. Even then he should be held under parole. He should understand that his sentence is still in force. Therefore he would be under constant helpful supervision and subject to recall for any shortcomings or misdemeanor.

The first-termer should not necessarily be considered a criminal, as it is his first mistake, therefore we should extend the helping hand when possible, by training, educating, and reforming. It will cost something to establish these better methods of treatment, but it will not cost one-tenth of what the present wastage amounts to; for example, Massachusetts in one year spent \$7,000,000 for its police system, courts, and prisons.

I believe that criminal records should be kept of all persons convicted of any infraction of the law, whether such persons are admitted to probation or not. This enables the authorities to establish beyond doubt the fact of a prior conviction in all cases where the probationer again falls under the hand of the law.

THE CONTROL OF CRIME

People are likely to jump to the conclusion that the control of crime rests solely with the police force. This is not the whole truth. The police may do excellent work and yet be hard put to control crime.

In the first place the District Attorney's office must prosecute the criminal. Theoretically a policeman should never make an arrest unless he sees his way towards a conviction; yet after the arrest the matter is mostly out of his hands. The principal work towards conviction has to be done by the District Attorney's office. Sometimes the office is tremendously overworked. They often allow prisoners, who have been arrested on certain charges, to plead guilty to a less charge—what is called accepting lower pleas.

The custom of accepting lower pleas is good in some cases. But too much of it is bad. If a man is arrested for burglary in the first degree and you have the evidence to convict him of burglary in the first degree, the case should be fought through on these lines; therefore, if he is convicted, he would be given the penalty prescribed by law for the offense of burglary in the first degree.

We may differ as to the fitness of penalties, but the law of the penal code is law. It must be in practice what it is on the pages of the book. If you see to it that your law means what it says, he will be a bold man that defies it.

Some laws which are framed, and which the police have to work under, are strangely inadequate to the situation. The law, for instance, that regulates the power of the police to deal with professional criminals is weak. The police have no proper preventive power. It seems to me we should not allow these old-timers to be in our midst any more than we tolerate a leper or a dangerous lunatic. Why should they be allowed to roam around the town like ravening wolves seeking whom they may rob? Yet the laws are such that the police are seriously hampered in their efforts to keep these criminals out.

When we are told that the police are lax, we should ask ourselves if the fault, after all, is not as much with public opinion as with the police. The work of the police should be to prevent crime. If the machinery of the law-enforcement is strong, if the criminal suffers as the public has decreed he shall suffer, we shall have fewer criminals. If, however, it works feebly, criminals will increase in numbers and boldness.

California has a big increase in convicts according to the report of the state parole officer, made public May 25 of this year. There were 450 more prisoners in California's two penitentiaries on May 1, 1914, than two years before, the largest year's increase in the history of the State, according to this report. The total on May 1, 1914 was 3,937—2,125 at San Quentin, 1,163 at Folsom, and 649 on parole. Only 6 paroled men were without work. The terms governing parole are that they shall keep regularly at work, and notify the probation officer of any change in employment.

There is a reason for the increase of crime in California that is doubtless patent to every thinking reader of the newspapers. Articles of a wholly sentimental nature, that mollicoddle the criminals who have been convicted and sent to prison, bear a number of very serious results. Public sympathy for a convict—one who is under the ban of the law—

puts that law in disrepute. So, far from instilling the younger mind with a wholesome regard for the law, it goes to the opposite extreme and to the criminally inclined makes it appear something to be desired, this suffering at the hands of the law, and being glorified by the public press.

CONVICTS SHOULD BE PLACED ON ROAD CONSTRUCTION

Thirteen States passed laws during 1913 allowing the use of convicts in the construction and repair of highways. They are Arkansas, Delaware, Florida, Illinois, Indiana, Kansas, Maine, New Jersey, North Dakota, Pennsylvania, Vermont, West Virginia, and Wisconsin. As many other States had previously passed similar legislation, and but few of the forty-eight States have not seen the wisdom of using prisoners to build and maintain public roads.

Outdoor work is healthy, therefore road work should be encouraged as a help in building up the physical condition of each prisoner whom it is safe to place outside of the prison. In Iowa the Board of Control of the State Institutions, with the advice of the Warden of any penal institution may permit able-bodied male prisoners to work on the roads. The law specifically states such labor shall not be leased to contractors. A prisoner opposed to such work, or whose character and disposition make it probable that he would attempt escape or become unruly, is not to be worked on the highways. Although the prisoners are under the jurisdiction of the Warden while building or repairing roads, their work is supervised by the State Highway Commissioner. Prisoners employed on the highways of Iowa receive such part of their earnings, above the cost of their keep, as the board deems equitable, the earnings either being funded or given to their dependent families.

The State of Nevada has passed legislation similar to that of Iowa. In 1911 a bill was enacted authorizing the employment of convicts on the public roads and highways. The sum of \$20,000 was appropriated to carry on this work, the convicts to be under the general direction of the Warden of the State Prison, and the actual details of road repair and construction to be under the supervision of the State Engineer. Convicts were put to work upon the road between Carson City and Reno, and the work continued until the appropriation was exhausted. As the next Legislature failed to provide an appropriation for the continuance of such work, the road camps were abandoned.

This method of utilizing convict labor, aside from the acknowledged good it produces in the individual prisoner, is of lasting benefit to the Commonwealth. It is an unailing source of labor that may be drawn upon at a minimum cost to the State, and its result, a good serviceable highway, has always been conceded one of the great civilizing influences that a country may possess.

Both Colorado and Utah have adopted this method and are producing fine results. In Colorado the available supply of such labor is apportioned to the different counties in need of road work, and each separate body of workmen is under the direct control of a supervisor appointed by the Warden. In this way the State is at all times in close contact with its prisoners, but they have escaped the prison environment and are earning a daily stipend, the county is enriched to the extent of good roads, and the State has a large number of useful citizens in the making and at a great saving of expense, as each county that utilizes

such labor must meet all maintenance charges and costs that pertain thereto.

The suggestions that I have made in this article are all based on practical experience reported from different quarters of the country and expressed by such men as Governor Eugene N. Foss of Massachusetts, Chas. D. Hill of New York, and former Police Commissioner Arthur Woods of New York, and also upon the personal experiences of the writer in close contact with criminal affairs covering a period of many years.

In closing it may be well to add that much has been said about the influence of heredity and of environment, but after both have been improved there will still be crime. It is personal, and personality has its seat and refuge in the human heart.

Would we eliminate crime and criminals, we must lay the emphasis upon the subjective forces of the human soul as well as upon the influences of material environment. In defective character lies the cause of crime.

RECOMMENDATIONS

I earnestly recommend that an appropriation of not less than \$75,000 be made by the next Legislature for the use of this department. I find the special appropriation for two years, of \$12,500, made for this department by the last Legislature, to be insufficient, and it has been necessary to draw heavily upon our reserve fund.

I further recommend that a relief bill be submitted for passage by the next Legislature providing for the payment of the \$5,000 reward offered by the State of Nevada for the arrest of the person or persons guilty of the murder of Harry Cambron and three associates.

At the time the reward was offered the members of my posse were engaged in the pursuit of the murderers, and were unaware that any reward had been offered. Consequently they were not inspired to Herculean efforts by the promise of large monetary remuneration, but endured the hardships, fatigue, and privations necessarily connected with the pursuit of the murderers solely because a great crime had been committed and the desire to bring the guilty person or persons to justice was paramount, and in so doing one of them gave up his life.

The reward of \$1,000 offered by the State of California for the arrest and conviction of the murderers of Harry Cambron and associates has been paid.

CONCLUSION

In conclusion I wish to thank those many officers who, by their cooperation and many favors, have helped make the success of this department possible. I sincerely hope that they will be brought into even closer relations with those matters which refer to the protection of the public generally from the depredations of habitual criminals and the elimination of this element from our State.

To those loyal and true members of my own force I want to express my appreciation for the prompt and cheerful obedience to all orders and a faithful performance of much arduous work with records of this department, which numerous calls, from headquarters to other parts of the State, caused to accumulate during their absence from this office, thereby rendering long hours and hard work necessary to satisfac-

torily carry on our operations with the least number of men and at the lowest possible expense.

In summing up the work of the department for the past two years it is necessary to make special mention of the operations in connection with the cattle industry in the State of Nevada.

The nature of this work, which is in effect a system of patrol that holds in check, not only cattle rustling, but also the unlawful killing of cattle upon the range, is such that it is necessary to keep the taxpayer and general public in ignorance as to the officers employed and the extent of their operations.

It has been the aim of this department to offer impartial service to both the small cattle-owner and the stockman who operates upon a larger scale.

During the season from June until the first fall of snow, which is the rustler's opportunity, officers from this department are in the field, at all times riding the range, attending round-ups, and becoming familiar with the personnel of the cattle industry, as only by such means is it possible to give adequate protection against the lawless element that make a business of stealing and killing range cattle.

The work of the department in this regard has been thorough and persistent, and the results obtained have proved eminently satisfactory as evidenced by the following fact: The annual meeting of the Northern Elko County Livestock Association was held at the Jack Creek schoolhouse on November 10 of this year. At this meeting, President Frank Rickey presiding, a vote of thanks was given to the officers of this department for their active cooperation with the association, and to Superintendent J. P. Donnelley of the State Police was tendered a vote of thanks for his ready response at all times when the services of his department were required.

I also desire to express my sincere appreciation of the courtesy, kindness, and consideration of your Excellency for the Superintendent and other members of this department, and for the assistance given the department after your personal investigation of the situation during the labor trouble in White Pine County.

The peaceable settlement of that trouble after this department arrived upon the ground is a demonstration of the fact that all business interests within the State have received ample protection from unlawful attacks, and that no encroachments on the rights of citizenship of any laboring man have been permitted.

These results were accomplished without bloodshed or destruction of property. This enables me to report that the objects of this organization, the preservation of law and order in the State of Nevada, have been maintained during the period of my office, and that at this time there is no trouble of any nature, and no prospect of trouble in the immediate future.

In striking contrast to the above, it may be well to point to the conditions that obtain at the present time in Colorado, Montana, and Arkansas, which exemplify the fact that enormous expenditures of money are of little or no avail in the lack of an efficient organization, such as ours, which is able to arrive on the scene in time of trouble without great delay; which allows of the adjustment of all matters

promptly and before the trouble could assume dangerous proportions.

When this department received the rush orders calling it to White Pine County during the recent labor troubles, the force was composed of five regular members only. While insufficient to cope with the situation, they were all competent to command squads of untrained men, their military training, experience, and knowledge of law qualifying them to efficiently handle any emergency that might arise. Over one hundred men were called into service within a few hours' time. These reserves are carried on the roster without any expense to the State whatever, subject to call at any time. Such has been the policy of the Superintendent, therefore there is no inactive member on salary at any time in the department.

Respectfully submitted,

J. P. DONNELLEY,
Superintendent.

O



STATE OF NEVADA

OFFICIAL RETURNS

OF THE

PRIMARY ELECTION, 1914

COMPILED BY

GEORGE BRODIGAN

Secretary of State of the State of Nevada



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1914



PRIMARY ELECTION RETURNS, 1914

For Representative in Congress

Counties	Democrat		Republican	
	Leonard B. Fowler.....	Fulton H. Sears.....	Cole L. Harwood.....	E. F. Roberts.....
Churchill.....	154	274	92	122
Clark.....	143	62	90	204
Douglas.....	51	12	51	131
Elko.....	418	177	140	304
Esmeralda.....	608	350	90	192
Eureka.....	47	25	32	67
Humboldt.....	484	184	66	157
Lander.....	72	25	23	45
Lincoln.....	172	118	30	67
Lyon.....	171	69	64	115
Mineral.....	187	41	74	116
Nye.....	626	261	137	350
Ormsby.....	206	51	107	133
Storey.....	307	18	41	220
Washoe.....	1,025	238	808	555
White Pine.....	420	154	191	380
Totals.....	5,121	2,119	2,086	3,158
Majority.....	3,002			1,122

For Governor

Counties	Democrat	
	Lemuel Allen.....	Emmet D. Boyle.....
Churchill.....	232	209
Clark.....	65	155
Douglas.....	62	34
Elko.....	235	405
Esmeralda.....	340	668
Eureka.....	27	50
Humboldt.....	315	440
Lander.....	70	46
Lincoln.....	109	209
Lyon.....	66	191
Mineral.....	78	166
Nye.....	260	676
Ormsby.....	100	165
Storey.....	71	256
Washoe.....	637	805
White Pine.....	81	561
Totals.....	2,748	5,036
Majority.....		2,288

For Lieutenant-Governor

Counties	Democrat	
	J. A. Ascher	Maurice J. Sullivan
Churchill.....	231	178
Clark.....	98	121
Douglas.....	53	38
Elko.....	329	280
Esmeralda.....	262	757
Eureka.....	38	38
Humboldt.....	321	391
Lander.....	56	60
Lincoln.....	112	201
Lyon.....	118	128
Mineral.....	95	144
Nye.....	379	547
Ormsby.....	92	154
Storey.....	92	208
Washoe.....	848	544
White Pine.....	192	406
Totals.....	3,311	4,136
Majority.....		884

For Justice of the Supreme Court

Counties	Democrat			
	H. F. Bartine	Ben W. Coleman	A. A. Heer	George F. Talbot
Churchill.....	70	136	112	106
Clark.....	16	69	42	36
Douglas.....	33	7	16	30
Elko.....	100	130	90	318
Esmeralda.....	123	485	185	206
Eureka.....	25	18	4	63
Humboldt.....	147	182	122	276
Lander.....	21	52	16	22
Lincoln.....	17	95	53	162
Lyon.....	88	29	43	71
Mineral.....	62	50	70	55
Nye.....	165	393	138	239
Ormsby.....	127	27	14	94
Storey.....	140	39	26	102
Washoe.....	369	340	375	819
White Pine.....	27	536	18	67
Totals.....	1,530	2,588	1,324	2,187
Plurality.....		401		

For Secretary of State

Counties	Republican		
	L. F. Adamson.....	A. W. Holmes.....	Alex L. Tannahill.....
Churchill.....	107	60	42
Clark.....	158	94	26
Douglas.....	90	39	45
Elko.....	105	242	82
Esmeralda.....	116	98	60
Eureka.....	39	44	15
Humboldt.....	104	79	28
Lander.....	23	26	26
Lincoln.....	47	41	8
Lyon.....	59	86	31
Mineral.....	70	67	42
Nye.....	170	222	78
Ormsby.....	132	55	49
Storey.....	32	37	198
Washoe.....	336	828	191
White Pine.....	177	227	146
Totals.....	1,765	2,245	1,067
Plurality.....		480	

For Clerk of the Supreme Court

Counties	Democrat		
	Harry J. Ooogan.....	Joe Josephs.....	Joe H. McCormack.....
Churchill.....	96	142	153
Clark.....	54	70	93
Douglas.....	24	57	16
Elko.....	189	252	175
Esmeralda.....	400	370	247
Eureka.....	27	34	15
Humboldt.....	255	202	238
Lander.....	50	33	19
Lincoln.....	93	116	89
Lyon.....	37	123	85
Mineral.....	60	110	72
Nye.....	245	360	320
Ormsby.....	71	127	65
Storey.....	44	127	158
Washoe.....	235	682	491
White Pine.....	238	181	180
Totals.....	2,118	2,991	2,416
Plurality.....		576	

For Superintendent of Public Instruction

Counties	Democrat	
	John Edwards Bray	Edward E. Winfrey
Churchill	176	228
Clark	171	47
Douglas	47	48
Elko	388	227
Esmeralda	567	380
Eureka	29	42
Humboldt	341	374
Lander	62	45
Lincoln	192	113
Lyon	113	128
Mineral	124	114
Nye	488	321
Ormsby	114	151
Storey	101	128
Washoe	598	800
White Pine	402	196
Totals	3,913	3,525
Majority	• 388	

For Inspector of Mines

Counties	Democrat			Republican	
	James D. Moore	Zeb Ray	Ed. Ryan	Mark G. Bradshaw	Andy J. Stinson
Churchill	133	86	179	86	120
Clark	61	83	131	148	127
Douglas	32	28	32	30	141
Elko	128	186	302	238	178
Esmeralda	255	352	429	196	72
Eureka	13	20	44	7	91
Humboldt	176	240	318	92	123
Lander	53	29	25	24	44
Lincoln	49	34	237	58	38
Lyon	108	48	98	94	81
Mineral	78	79	85	140	51
Nye	322	309	306	207	263
Ormsby	92	87	128	38	187
Storey	265	14	53	131	91
Washoe	484	561	356	677	657
White Pine	86	250	301	220	322
Totals	2,330	2,304	3,022	2,399	2,611
Majority					212
Plurality			692		

For Judge of the First Judicial District

Counties	Democrat	
	Frank P. Langen.....	Alfred Chantz.....
Douglas.....	59	38
Ormsby.....	121	137
Storey.....	260	76
Totals.....	440	251
Majority.....	179	

For Judges of the Second Judicial District

County	Democrat			Republican		
	James Glynn.....	J. S. Parker.....	Richard C. Stoddard.....	Albert D. Ayres.....	Thomas F. Moran.....	A. N. Salisbury.....
Washoe.....	784	437	936	479	1,053	820
Pluralities.....	(*)		(*)		(*)	(*)

*Nominated.

For Judge of the Seventh Judicial District

Counties	Democrat	
	Peter J. Somers.....	J. Emmett Walsh.....
Esmeralda.....	485	531
Mineral.....	144	106
Totals.....	629	637
Majority.....		8

For Judge of the Ninth Judicial District

County	Democrat		
	Clarence A. Eddy.....	O. J. McFadden.....	Wm. McKnight.....
White Pine.....	67	306	239
Plurality.....		7	

For Judge of the Tenth Judicial District

Counties	Democrat	
	Chas. E. Forley.....	O. J. Van Pelt.....
Clark.....	85	147
Lincoln.....	153	144
Totals.....	238	291
Majority.....		53

STATE OF NEVADA

OFFICIAL RETURNS

OF THE

Election of November, 1914

**Compiled by
GEORGE BRODIGAN
Secretary of State**



CARSON CITY, NEVADA

**STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1915**

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914

County, and precinct	United States Senator			Representative in Congress			Justice of Supreme Court		Governor			Lieutenant-Governor			Secretary of State	
	A. Grant Miller, Socialist			Francis G. Newlands, Democrat			Samuel Platt, Republican		Leonard B. Fowler, Democrat			E. E. Roberts, Republican			Martin J. Scanlan, Socialist	
Churchill	66	82	106	70	128	55	106	127	91	42	120	48	99	99	112	119
	87	112	108	97	128	74	126	160	104	57	143	73	105	118	143	135
	14	20	21	26	28	11	21	32	19	9	26	13	22	21	24	30
	45	35	18	26	26	44	39	40	20	43	36	50	28	19	47	35
	33	54	46	55	29	51	67	49	28	53	53	32	46	63	69	48
	18	40	23	30	36	14	32	42	40	13	28	13	28	37	39	30
	6	2	1	1	1	6	6	1	3	3	2	4	0	4	1	1
	10	22	38	28	36	6	27	42	12	1	58	3	84	32	77	33
	82	35	12	34	27	68	57	44	52	61	25	61	21	47	77	31
	1	4	16	8	10	0	6	13	8	1	11	1	7	12	11	10
Totals	361	406	399	353	475	309	470	568	398	248	502	298	390	442	565	472
Clark	10	16	13	8	20	10	21	16	12	11	15	11	13	15	21	15
	20	42	19	26	36	17	42	28	37	18	27	19	21	42	41	31
	6	4	4	5	3	5	6	5	9	1	3	8	6	5	8	6
	34	30	22	18	30	37	42	31	24	34	28	37	22	25	49	27
	4	7	6	7	4	4	11	5	7	5	6	4	9	9	11	6
	114	201	171	181	202	93	265	205	255	68	155	89	145	242	297	167
	6	1	5	2	4	4	6	1	5	6	6	6	4	2	4	6
	8	18	13	17	18	4	21	12	22	3	9	3	7	23	20	14
	2	19	5	11	13	2	16	9	12	2	12	8	7	15	15	9
	1	36	20	27	30	0	35	23	25	2	30	6	22	29	32	25
	1	23	9	21	11	1	19	13	19	1	13	1	11	21	22	10
	1	23	18	19	24	0	19	17	11	0	31	1	19	15	17	12
	0	25	10	6	27	0	13	19	13	0	20	0	16	15	16	15
	201	447	315	347	419	177	513	392	447	150	354	183	297	458	563	353
Totals	201	447	315	347	419	177	513	392	447	150	354	183	297	458	563	353

Douglas

East Fork	62	86	143	107	148	28	89	176	75	27	177	33	126	112	140	127
Genoa	4	23	50	30	45	8	21	55	20	5	53	6	43	28	46	28
Jacks Valley	3	5	12	6	11	2	4	15	4	4	13	4	7	8	17	2
Mottsville	2	16	41	19	40	1	9	50	18	8	40	2	87	17	53	27
Totals	61	130	246	162	244	29	123	296	117	37	283	44	213	165	236	184

Elko

Bryan	0	5	10	3	11	0	4	12	4	0	11	0	8	6	5	9
Carlin	77	65	74	54	87	70	98	94	98	60	58	65	55	92	121	65
Clover Valley	0	14	11	11	14	0	8	19	11	11	15	0	10	10	10	16
Columbia	4	12	1	12	2	3	13	4	4	3	1	4	1	12	16	1
Cloverdale	4	7	9	6	11	2	7	12	4	4	13	3	11	5	8	10
Contact	5	15	17	17	14	6	20	15	17	6	16	6	14	18	19	15
Elko No. 1	58	123	143	134	134	48	120	195	149	37	140	53	104	157	164	133
Elko No. 2	41	117	97	117	98	40	99	149	118	33	105	32	92	129	121	115
Fort Halleck	3	1	4	2	2	0	3	3	3	1	2	2	1	4	4	2
Halleck	6	10	7	11	9	2	11	10	12	1	10	3	4	14	14	7
Huntington	1	2	3	3	3	0	1	5	2	0	4	0	3	3	3	3
Inland Mountain	1	15	7	12	8	3	14	9	10	4	10	4	5	14	17	7
Jack Creek	1	5	7	6	5	1	6	6	4	1	6	1	2	6	9	3
Jarbridge	15	69	19	60	31	16	65	36	66	12	29	14	23	66	71	23
Lamoille	2	26	40	25	39	2	17	15	26	1	41	1	36	26	31	33
Mardis	1	11	5	6	11	0	8	8	10	1	5	1	5	9	10	6
Metropolis	2	15	50	46	20	2	16	49	40	3	25	4	17	48	45	18
Midas	58	14	8	13	24	40	36	25	32	23	18	33	19	24	43	18
Mountain City	1	17	3	14	7	0	12	9	12	1	8	0	16	15	13	8
Montello	41	17	20	19	18	40	30	32	19	37	20	36	16	22	29	33
Mound Valley	1	7	26	8	25	1	17	16	10	2	19	1	0	11	14	19
North Fork	0	15	18	13	14	1	17	10	10	2	21	1	17	11	15	11
North Ruby	0	11	18	12	18	0	7	24	10	0	21	1	17	11	15	15
O'Neil	1	4	2	4	2	1	2	5	0	1	4	1	2	4	5	2
Railroad	8	14	5	10	10	7	10	16	11	7	9	8	5	14	13	11
Ruby Valley	5	7	17	5	18	4	3	24	2	3	23	4	16	7	13	15
Star Valley	10	47	80	50	74	10	59	69	67	6	65	12	62	69	74	58
South Fork	6	15	19	11	22	7	12	25	10	5	24	8	18	13	17	19
Sprucemont	0	2	4	2	4	0	1	5	3	0	3	0	3	3	4	2
Shafter	6	6	6	0	4	3	5	9	3	11	0	2	2	10	10	2
Tecoma	6	6	3	4	7	4	10	4	6	5	4	6	3	7	10	3
Tobac	5	13	9	13	7	6	15	11	13	5	9	5	7	15	15	11
Toano	5	2	3	2	3	4	6	3	3	6	3	5	2	3	7	2
Tuscarora	30	30	36	26	47	21	34	56	40	22	82	27	30	34	51	38
White Rock	8	7	11	8	17	5	4	20	3	4	18	6	11	9	10	12
Wells	13	69	60	59	74	11	65	72	54	8	84	9	72	57	72	68
Welland	2	7	4	8	4	1	6	6	9	1	3	2	4	7	9	4
Totals	426	824	848	812	898	364	851	1128	909	308	895	359	727	963	1118	822

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	United States Senator			Representative in Congress			Justice of Supreme Court		Governor			Lieutenant-Governor			Secretary of State		
	A. Grant Miller, Socialist.....	Francis G. Newlands, Democrat.....	Samuel Platt, Republican.....	Leonard B. Fowler, Democrat.....	E. E. Roberts, Republican.....	Martin J. Scanlan, Socialist.....	Ben W. Coleman, Democrat.....	B. F. Ourler, Republican.....	Emmet D. Boyle, Democrat.....	W. A. Morgan, Socialist.....	Tasker L. Oddie, Republican.....	W. H. Burton, Socialist.....	J. Lozano, Republican.....	Maurice J. Sullivan, Democrat.....	George Brodigan, Democrat.....	A. W. Holmes, Republican.....	
Ormsby	34	130	152	140	150	23	109	196	140	22	155	20	126	165	206	96	
	49	150	191	144	207	38	122	258	180	30	202	86	173	176	223	158	
	88	280	343	284	357	61	231	454	300	52	357	56	299	341	429	254	
	Totals.....																
Storey	10	70	84	83	73	4	61	90	93	4	66	8	60	89	98	66	
	9	69	83	64	83	5	58	91	64	4	83	6	72	72	75	72	
	17	119	112	117	125	7	109	133	125	7	119	12	104	132	140	104	
	8	53	60	54	67	6	67	65	61	5	60	6	58	60	64	59	
	4	4	1	2	5	2	3	4	5	1	3	3	3	2	3	4	
	Totals.....	43	310	320	353	24	298	383	343	21	331	35	297	355	375	305	
Washoe	40	132	186	140	189	24	134	213	183	18	161	20	167	172	119	232	
	31	106	112	111	124	20	118	180	142	10	109	13	102	142	108	147	
	48	96	112	111	113	21	114	192	153	10	80	14	96	145	112	119	
	28	62	74	74	73	10	54	86	95	7	59	10	86	90	113	100	
	39	106	123	115	144	17	124	141	153	14	71	17	81	91	135	146	
	73	123	134	122	132	24	132	139	167	16	79	21	77	123	177	185	
	40	134	184	143	160	23	137	171	167	14	73	26	77	100	123	120	
	61	133	149	146	161	32	131	211	204	23	120	28	126	136	145	180	
	44	103	123	117	125	25	101	156	151	16	105	32	94	130	122	137	
	123	141	183	167	174	76	181	206	259	49	120	60	105	243	197	199	

Sparks No. 1	73	98	112	87	132	53	108	141	107	45	124	53	124	124	103	104	148
Sparks No. 2	66	97	142	86	160	49	131	152	106	88	160	48	124	142	103	104	196
Wadsworth	15	88	41	29	51	12	90	57	50	8	4	3	4	44	39	42	47
Olinghouse	6	3	6	5	7	3	6	8	7	8	4	12	11	6	16	8	6
Bald Mountain	8	12	14	5	18	10	16	16	13	10	11	6	10	6	16	18	13
Flandan	8	4	5	3	8	4	5	9	4	4	4	3	9	9	4	6	7
Gerlach	12	36	34	19	56	8	35	44	42	6	38	13	34	34	33	43	40
Salt Marsh	4	12	6	0	11	2	3	9	2	4	6	4	3	4	6	4	8
Leadville	5	11	2	5	5	6	10	5	13	5	1	6	1	6	8	10	6
Duck Lake	2	3	19	3	17	4	6	17	7	3	15	6	12	12	5	5	14
Verd	8	90	42	69	53	7	46	52	93	6	29	7	30	30	90	61	60
Franktown	3	12	6	11	7	3	8	13	17	1	3	1	5	15	15	5	6
Hufakers	6	15	34	13	34	4	12	39	19	1	32	4	31	17	21	17	27
Washoe	1	29	7	22	15	0	24	12	32	0	5	1	5	29	25	25	7
Totals	769	1508	1744	1595	1892	442	1556	2120	2247	312	1480	411	1423	2119	1690	2087	

White Pine

Ely No. 1	98	100	99	110	106	77	199	85	149	61	98	70	83	141	151	107
Ely No. 2	66	109	89	112	100	49	183	67	144	34	86	42	83	137	169	89
Choccola Creek	17	11	32	10	33	7	37	12	14	4	33	5	5	14	14	35
Snake Valley	8	17	33	37	33	6	42	37	41	5	27	9	20	52	57	37
Newark	0	13	20	12	24	7	31	11	15	0	21	0	21	14	17	23
Preston	16	11	13	12	7	12	32	4	17	11	12	12	12	16	16	4
Elmore City	4	8	16	13	6	11	37	7	9	7	19	7	15	16	10	10
Hamilton	14	28	15	21	17	11	37	12	23	7	19	0	21	26	23	26
Elmore	1	22	27	11	29	5	49	8	21	0	26	5	21	19	19	23
Bobby Mountain	1	1	4	1	9	2	3	0	4	5	10	2	1	7	7	9
Malvin	1	9	4	1	1	2	12	3	1	2	10	5	1	7	7	9
Butte	28	49	45	55	35	35	97	13	62	32	24	24	37	57	68	45
Ely City	67	50	68	59	79	47	122	54	73	25	73	41	64	73	95	98
Pleasant Valley	3	9	6	8	3	0	7	2	7	0	8	0	8	8	8	6
Muncy	0	3	11	5	11	4	16	6	13	2	8	0	2	14	11	10
Snider	168	111	161	115	209	111	277	183	146	91	203	96	175	155	187	240
Therett	0	1	6	0	7	0	1	6	10	6	7	0	7	0	0	7
Taft	6	9	13	9	12	5	11	14	10	6	11	5	8	13	15	11
Kimberly	0	9	13	9	12	5	11	14	10	6	11	5	8	13	15	11

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	State Controller	State Treasurer	Surveyor- General	Supt. of Public Instruction	Supt. of State Printing	Attorney General		Clerk of Supreme Court
						Geo. B. Thatcher, Democrat	Joe Josephs, Democrat	
Ormsby	Jacob Eggers, Republican	William McMillan, Republican	Matthew Kyle, Republican	John Edwards Bray, Democrat	Fred R. Trimmer, Progressive	Richard A. McKay, Republican	No opponent	
	George A. Cole, Democrat	Ed Malley, Democrat	Charles L. Deady, Democrat	J. F. Abel, Republican	Joe Farnsworth, Democrat			
Carson City—First Ward	85	181	169	162	254	32	208	
Carson City—Second Ward	124	159	181	207	296	45	266	
Totals	209	404	340	369	550	77	474	
Storey								
Virginia City—First Ward	82	88	94	60	133	29	101	
Virginia City—Second Ward	81	60	66	97	115	23	86	
Virginia City—Third Ward	123	136	110	143	98	31	63	
Gold Hill	63	67	46	75	98	29	164	
Truckee River	4	6	2	3	7	1	6	
Totals	388	323	360	440	564	118	424	
Washoe								
Reno No. 1	132	136	210	188	267	48	264	
Reno No. 2	117	115	139	177	209	33	190	
Reno No. 3	126	104	127	135	186	35	131	
Reno No. 4	70	64	93	114	118	29	102	
Reno No. 5	117	146	135	84	72	63	113	
Reno No. 6	179	187	159	122	218	41	62	
Reno No. 7	83	127	127	145	118	107	120	
Reno No. 8	117	83	151	133	253	47	236	
Reno No. 9	127	141	125	91	133	66	260	
Reno No. 10	107	109	113	175	159	46	169	
	206	216	184	166	309	31	280	
				134		110	122	
				210		124	200	

Douglas

East Fork	67	193	94	170	121	140	123	143	170	262	134	54	242	128	290
Genoa	16	61	26	47	37	39	41	30	50	19	19	15	35	26	178
Jacks Valley	2	17	5	14	6	13	6	12	13	5	5	2	8	8	57
Mottsville	11	50	17	44	21	37	22	37	23	29	30	11	33	17	41
Totals	96	321	142	275	185	229	192	222	262	262	134	54	242	128	290

Elko															
Bryan	4	12	4	10	6	10	11	4	8	2	2	8	0	6	10
Carlin	90	99	120	69	103	99	80	109	142	37	37	40	41	107	132
Clover Valley	4	21	11	14	13	11	17	9	16	10	1	1	0	16	20
Columbia	15	2	16	1	17	0	1	16	16	1	1	1	0	16	13
Cloverdale	5	13	8	11	11	7	6	11	10	10	7	10	0	8	15
Contact	17	17	20	14	19	16	16	18	21	11	11	61	15	23	23
Elko No. 1	115	191	179	124	168	131	171	130	242	46	61	74	161	176	226
Elko No. 2	70	174	134	103	134	99	110	131	186	35	43	70	122	176	176
Fort Halleck	3	3	3	3	3	3	3	3	6	0	2	2	1	6	6
Halleck	11	11	14	6	15	6	5	16	16	3	5	3	12	15	15
Huntington	2	4	3	3	3	3	2	4	5	1	2	2	1	3	5
Island Mountain	16	8	17	7	15	9	9	15	18	4	6	3	15	23	3
Jack Creek	3	9	8	3	8	4	5	7	9	2	0	0	4	6	9
Jarbridge	58	41	75	24	68	34	36	62	73	21	26	20	50	80	80
Lamoille	13	53	30	34	29	35	43	22	44	11	22	15	27	45	45
Mardis	8	8	8	5	10	5	6	9	11	3	4	1	9	14	14
Metropolis	11	54	18	49	46	21	16	51	54	8	17	43	59	67	67
Midas	32	36	62	16	38	26	41	30	61	14	10	18	39	67	67
Mountain City	9	12	16	6	16	5	7	14	18	3	2	4	15	18	18
Montello	24	38	26	37	30	31	28	35	43	19	17	10	37	63	63
Mound Valley	8	25	12	20	12	12	17	12	23	6	13	6	13	19	19
North Fork	13	20	21	20	21	11	19	14	23	5	10	1	20	19	19
North Ruby	7	24	12	18	18	13	13	17	21	5	10	10	10	19	19
O'Neil	1	6	4	2	6	1	2	5	6	0	2	2	4	4	6
Railroad	8	19	14	10	10	16	11	16	20	5	11	4	10	20	20
Ruby Valley	4	23	10	15	16	12	14	9	16	5	12	9	5	17	17
Star Valley	42	88	63	70	64	64	67	63	89	80	44	30	57	97	97
South Fork	10	27	15	20	17	19	20	15	19	15	9	14	12	27	27
Sprucemont	2	4	4	2	4	2	2	4	4	2	2	0	4	4	6
Shafter	7	4	7	6	9	8	5	8	11	1	2	2	1	11	11
Tecoma	5	9	11	8	11	3	4	10	11	3	3	1	9	10	14
Tober	16	8	17	8	14	12	9	17	18	4	8	8	17	23	23
Toano	5	4	6	3	6	3	5	6	6	5	2	6	6	9	9
Tucarora	20	73	65	28	58	31	27	61	72	11	20	27	42	74	74
White Rock	5	19	9	13	10	13	16	7	16	4	12	3	7	16	16
Wells	37	101	65	74	82	56	43	89	99	27	46	38	57	90	90
Weiland	4	9	4	4	9	3	4	9	10	1	1	4	6	12	12
Totals	704	1988	1106	842	1133	807	894	1066	1451	364	604	484	994	1477	1477

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	Inspector of Mines	Regents State University (Long Term)							Regent State University (Short Term)			Constitutional Amendments						
		Atha A. Richie, Socialist.....	Ed Ryan, Democrat.....	Andy J. Stinson, Republican.....	H. B. Lind, Progressive.....	James W. O'Brien, Republican.....	John J. Sullivan, Democrat.....	Lloyd B. Thomas, Socialist.....	Robert G. Withers, Democrat.....	John E. Worden, Socialist.....	W. G. Barker, Socialist.....	F. N. Fletcher, Progressive.....	Chas. B. Henderson, Democrat.....	Chas. P. Squires, Republican.....	No. 1		No. 2	
															For.....	Against.....	For.....	Against.....
Churchill																		
New River No. 1.....	73	58	119	51	108	92	50	65	63	50	16	88	77	90	120	96	43	
New River No. 2.....	97	73	125	49	112	104	66	102	78	67	18	106	90	146	117	133	53	
Hazen.....	13	17	24	18	25	16	13	15	10	10	5	19	17	21	18	20	6	
Lahontan.....	46	27	22	20	22	18	48	16	53	48	6	21	17	66	19	40	7	
St. Clair.....	45	37	46	31	44	51	30	49	25	23	11	52	31	71	37	66	20	
Stillwater.....	22	32	26	22	30	36	16	29	15	13	7	35	21	62	13	33	10	
Terrill.....	8	0	0	2	5	1	5	1	5	5	0	2	1	8	0	7	0	
Fairview.....	7	22	43	19	28	41	5	25	6	7	4	31	23	12	48	30	17	
Wonder.....	62	38	24	18	39	64	37	55	61	9	0	32	15	81	23	50	23	
White Rock.....	1	16	3	2	11	12	9	1	1	1	0	10	8	9	4	5	1	
Totals.....	374	320	493	231	405	410	297	348	311	285	76	395	300	596	375	507	180	
Clark																		
Nelson.....	8	24	7	11	14	15	9	10	11	10	6	8	13	31	5	23	4	
Searchlight.....	20	22	19	14	24	35	19	30	12	18	9	29	20	52	21	43	10	
Crescent.....	3	5	6	5	5	6	4	3	3	3	1	6	3	9	2	8	1	
Good Springs.....	38	31	17	15	26	20	37	13	28	33	4	19	24	67	8	54	9	
Arden.....	5	11	3	2	6	11	4	7	4	4	0	9	4	11	4	11	2	
Las Vegas.....	84	200	183	79	165	196	105	187	104	90	23	187	163	296	153	296	86	
Indian Springs.....	5	3	4	1	4	2	6	2	6	3	1	3	11	0	9	8	2	
Mospe.....	5	18	9	6	11	19	6	13	2	3	2	20	9	17	9	17	6	
Logan.....	4	9	10	5	9	15	4	13	1	0	3	15	7	21	1	15	0	
Overton.....	3	30	23	11	30	30	3	22	1	0	2	26	23	61	0	45	0	
St. Thomas.....	2	19	11	11	11	19	2	19	2	1	5	19	8	28	5	19	1	
Bunkerville.....	0	22	18	8	20	18	4	13	3	0	6	23	11	35	3	24	5	
Mesquite.....	0	17	16	6	16	17	0	13	0	0	6	14	10	23	3	23	0	
Totals.....	177	411	324	174	341	404	203	351	177	169	73	375	298	659	214	596	126	

Douglas

East Fork	39	49	196	53	112	125	41	78	41	36	13	90	99	119	120	112	64
Genoa	4	22	60	23	41	34	6	19	6	4	2	24	5	34	33	37	19
Jacks Valley	1	4	14	6	8	9	5	5	3	4	1	7	6	6	11	4	9
Motusville	2	8	51	17	40	24	6	13	4	5	3	19	23	39	14	35	6
Totals	38	83	311	99	201	192	56	116	54	49	29	140	161	198	178	188	98

Elko

Bryan	0	6	8	3	9	2	1	8	2	1	2	6	7	8	5	8	4
Carlin	64	56	90	26	69	77	72	69	61	72	5	86	37	104	87	77	57
Clover Valley	0	10	16	8	16	11	0	12	0	0	1	20	5	19	2	16	1
Columbia	7	10	0	0	0	14	4	12	4	3	0	13	0	5	10	13	2
Cloverdale	3	9	6	4	9	7	3	7	2	3	0	11	6	15	3	13	3
Contact	5	13	19	7	13	16	7	17	7	6	2	14	13	13	16	16	4
Elko No. 1	51	92	173	34	111	143	62	99	86	41	9	188	68	147	138	131	90
Elko No. 2	34	96	120	27	92	119	43	98	62	41	2	164	43	129	106	121	31
Fort Halleck	1	3	2	0	3	4	0	4	1	0	0	6	0	2	0	0	0
Halleck	2	8	11	1	5	13	4	14	1	2	0	15	6	8	10	10	1
Huntington	0	3	3	3	2	2	1	4	0	0	0	4	2	1	4	3	0
Island Mountain	3	11	10	4	6	12	4	11	4	3	2	10	7	11	9	16	3
Jack Creek	8	2	8	2	2	6	5	5	3	2	0	8	1	9	3	8	2
Jarbridge	16	56	81	17	30	61	17	82	12	13	7	54	21	61	36	53	20
Lamoille	1	22	39	14	36	27	3	24	7	3	3	41	15	46	16	32	3
Mardis	1	5	9	1	6	8	1	10	2	1	1	39	21	61	3	7	7
Metropolis	4	11	62	12	41	42	8	19	8	4	3	24	7	69	4	43	6
Midas	36	37	7	2	17	13	39	16	39	37	3	16	2	11	6	9	3
Mountain City	1	14	6	2	14	14	1	16	1	0	1	24	7	11	19	30	21
Montello	88	19	20	9	15	25	38	22	34	2	3	24	6	14	12	12	4
Mound Valley	1	12	13	15	15	15	1	12	2	2	2	20	6	14	12	12	7
North Fork	0	15	17	2	12	20	1	23	2	1	3	23	16	16	12	12	4
North Ruby	2	14	16	6	13	11	1	16	2	0	0	19	11	13	10	14	6
O'Neill	1	4	2	0	12	6	1	16	1	1	1	6	1	6	6	6	1
Railroad	3	3	19	4	11	13	4	13	3	4	1	16	4	14	6	18	0
Ruby Valley	3	3	20	2	19	10	4	6	3	3	1	19	4	12	14	15	4
Star Valley	3	7	18	7	71	64	11	67	11	9	5	71	43	77	47	55	91
South Fork	8	46	13	10	13	13	13	11	8	7	4	17	9	30	10	10	13
Spurmont	0	16	1	0	5	4	2	8	0	0	0	7	2	3	1	6	4
Shafter	0	12	1	1	1	7	2	3	3	1	0	7	2	6	6	6	6
Tecoma	4	14	7	2	3	11	4	7	4	5	0	9	1	8	8	8	8
Tobias	4	14	7	2	3	11	4	7	4	5	0	9	1	8	8	8	8

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	Inspector of Mines	Regents State University (Long Term)						Regent State University (Short Term)				Constitutional Amendments						
		Andy J. Stinson, Republican.....	Ed Ryan, Democrat	Atha A. Richie, Socialist.....	H. B. Lind, Progressive	James W. O'Brien, Republican.....	John J. Sullivan, Democrat	Lloyd B. Thomas, Socialist.....	Robert G. Withers, Democrat	John E. Worden, Socialist.....	W. G. Barker, Socialist.....	F. N. Fletcher, Progressive	Chas. B. Henderson, Democrat	Chas. P. Squires, Republican.....	No. 1		No. 2	
															For.....	Against.....	For.....	Against.....
Emeralda																		
Goldfield, Ward No. 1.....	57	124	77	60	51	110	74	119	68	72	14	112	53	158	84	141	44	
Goldfield, Ward No. 2.....	93	146	141	132	99	120	92	170	90	85	31	145	96	212	162	216	76	
Goldfield, Ward No. 3.....	93	177	68	35	48	89	90	83	94	84	15	86	38	162	57	216	40	
Goldfield, Ward No. 4.....	73	92	88	60	61	106	71	102	64	68	14	106	53	128	109	127	47	
Goldfield, Ward No. 5.....	98	66	69	51	48	72	93	64	92	6	13	68	41	131	79	99	52	
Blair.....	8	35	15	15	18	29	6	28	6	40	4	30	21	30	21	23	18	
Columbia.....	37	34	32	29	25	21	34	32	37	6	4	31	19	67	24	54	14	
Coaldale.....	2	0	3	1	1	1	1	1	1	2	0	1	2	4	1	3	1	
Fish Lake.....	3	6	13	5	5	14	3	12	3	4	0	12	3	13	4	14	0	
Gold Mountain.....	0	6	2	5	3	3	0	3	0	0	5	1	2	6	1	6	1	
Horn Silver.....	8	7	1	2	3	6	8	6	6	7	3	5	1	10	4	4	2	
Lida.....	7	10	6	5	4	9	7	13	6	6	3	12	3	17	4	11	0	
Mary Mine.....	17	19	2	1	3	16	6	14	6	6	5	10	14	10	14	16	4	
Millers.....	17	38	61	27	30	61	17	50	20	16	16	50	22	84	22	69	13	
Silver Peak.....	6	1	1	0	1	3	8	1	5	5	1	2	1	7	0	7	0	
Totals.....	509	663	579	424	403	668	505	698	498	501	125	673	353	1039	576	928	311	
Eureka																		
Eureka.....	7	39	136	45	107	60	13	62	18	15	9	69	74	65	85	66	33	
Ruby Hill.....	1	4	21	6	16	9	4	10	3	2	0	13	10	6	15	6	11	
Garrison.....	10	0	5	2	6	6	4	5	5	3	0	6	5	6	8	7	6	
Beowawe.....	3	11	28	11	22	19	3	11	1	2	2	20	11	19	14	19	1	
Pallada.....	13	16	49	7	37	40	20	21	13	12	8	42	12	34	30	27	20	
Mineral Hill.....	3	15	6	2	5	13	4	13	5	5	0	16	1	10	10	15	4	
Alpha.....	0	6	6	2	8	8	2	4	0	1	1	8	1	4	6	6	2	
Prospect.....	2	2	7	3	2	4	1	5	2	2	0	4	2	2	9	2	5	
Buckhorn.....	16	29	45	16	42	35	20	23	15	11	12	29	23	31	46	41	22	
Totals.....	55	122	303	94	249	194	76	143	62	63	32	207	143	175	223	198	106	

Humboldt

Winemucca	37	109	105	42	79	119	54	106	40	33	8	123	54	133	95	112	36
West Winemucca	51	94	111	41	78	112	85	121	64	74	16	124	62	222	122	167	50
Lovelock	51	153	245	133	197	176	99	82	56	45	29	190	130	8	76	8	41
Spring Valley	56	4	5	13	2	6	6	6	6	4	3	54	4	101	1	62	0
Rochester	56	60	23	13	26	59	55	50	59	56	6	54	18	44	10	62	10
Lower Rochester	56	31	32	39	41	39	32	44	32	30	9	48	26	69	16	36	6
Colona	27	31	34	30	27	21	23	23	23	20	2	27	6	8	12	2	7
Glover Valley	1	31	86	90	58	55	21	48	16	18	11	13	41	73	13	50	7
Prudhoe	14	81	86	90	58	55	21	48	16	18	11	13	41	73	13	50	7
Willow Point	0	12	7	3	4	15	0	3	0	0	3	12	6	13	8	11	0
McDermitt	2	12	7	3	4	15	0	3	0	0	3	12	6	13	8	11	0
Rebel Creek	2	12	7	3	4	15	0	3	0	0	3	12	6	13	8	11	0
Amador	2	12	7	3	4	15	0	3	0	0	3	12	6	13	8	11	0
Mill City	0	6	35	15	38	40	20	37	17	10	2	49	23	45	12	29	0
Humboldt	17	46	38	22	2	8	3	1	6	5	3	5	1	9	3	8	0
Jungo	6	6	6	2	0	5	8	3	6	6	2	5	1	9	3	8	0
Shubert	1	2	13	1	7	7	2	4	5	6	0	3	7	2	3	4	0
Public	1	2	13	1	7	7	2	4	5	6	0	3	7	2	3	4	0
Vierle	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eastlet Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
National	25	62	14	1	10	50	80	45	31	34	4	93	16	70	10	45	8
Dun Glen	4	4	6	2	5	7	4	4	0	0	0	4	1	11	0	11	0
Kennedy	0	9	7	5	7	11	5	8	0	0	0	5	5	4	2	5	0
Unionville	39	21	32	14	16	27	43	23	39	47	3	26	7	65	10	41	0
Maxuma	2	7	4	3	3	7	6	6	3	3	0	8	2	11	3	8	0
Vernon	2	6	4	2	4	5	3	7	3	3	3	8	3	2	9	10	0
Jackson Creek	3	13	6	6	6	12	3	12	7	3	3	8	3	2	9	10	0
Oreana	9	8	2	2	5	6	9	8	5	3	2	4	3	14	4	10	0
Star Peak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Goldbanks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rye Patch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	422	763	804	394	638	846	490	672	430	433	134	829	443	1094	426	801	193

Lander

Austin Ward No. 1	18	34	57	21	52	50	18	34	8	11	8	46	34	55	26	56	12
Austin Ward No. 2	11	44	54	16	37	57	17	47	8	9	9	62	20	73	20	58	15
Argenta	36	93	112	49	82	107	55	87	37	31	19	122	45	130	60	100	39
Canter Canyon	31	5	0	0	5	5	5	5	5	5	5	5	5	5	5	5	5

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	Inspector of Mines	Regents State University (Long Term)					Regent State University (Short Term)				Constitutional Amend- ments				
		Andy J. Stinson, Republican	Ed Ryan, Democrat	Atha A. Richie, Socialist	H. B. Lind, Progressive	James W. O'Brien, Republican	John J. Sullivan, Democrat	Lloyd B. Thomas, Socialist	Robert G. Withers, Democrat	John E. Worden, Socialist	No. 1		No. 2		
											For	Against	For	Against	
Lincoln															
Pioche	9	156	25	23	62	111	24	93	11	13	7	109	46	105	20
Caliente	19	88	33	14	38	66	23	55	19	35	49	96	21	91	10
Alamo	11	18	4	0	6	16	10	19	11	63	103	32	1	28	1
Hiko	4	1	8	4	8	1	6	0	5	17	7	12	0	10	0
Deer Lodge	2	3	5	3	5	5	3	1	2	3	7	10	1	9	1
Elgin	1	7	6	1	5	8	1	0	0	6	7	9	6	12	0
Clover Valley	0	7	2	2	3	7	0	6	0	7	2	9	0	7	0
Eagle Valley	0	13	3	3	4	12	0	12	0	4	4	11	2	9	1
Atlanta	2	10	5	3	4	5	4	5	0	3	5	14	1	13	0
Jack Rabbit	0	11	1	0	4	11	1	5	0	0	11	7	2	5	0
Lake Valley	2	4	3	2	2	3	3	3	2	0	2	6	0	6	0
Spring Valley	0	7	1	1	4	7	0	5	0	4	3	7	2	7	2
Panaca	2	46	19	6	24	44	3	43	2	37	23	63	0	47	0
Totals	52	371	117	64	167	296	81	255	57	270	145	383	81	349	35
Lyon															
Mason Valley	48	79	186	76	137	147	60	106	45	120	120	141	125	144	91
Sprague	16	57	49	31	46	56	22	45	19	106	106	67	82	63	15
Plummer	2	26	19	6	18	33	2	26	2	54	54	32	8	34	5
Wabaska	4	13	40	14	27	31	10	14	4	23	23	20	27	27	11
Thompson	2	17	11	11	12	8	3	8	4	8	8	13	19	15	2
Ludwig	2	23	7	6	9	9	14	15	3	8	13	19	2	15	2
Smith Valley	15	17	46	24	29	25	12	17	6	17	17	19	11	15	10
Simpson	14	13	19	16	17	14	15	11	10	24	24	36	24	42	13
Buckskin	8	4	7	7	7	4	3	2	5	13	11	13	5	33	6
Dayton	0	26	62	16	43	63	9	43	14	34	38	27	60	45	18
Mound House	4	2	13	5	10	8	8	3	4	6	8	11	6	7	3
Silver City	31	22	29	6	15	33	20	21	27	27	27	21	6	30	10
Canal	18	16	17	10	21	15	89	33	18	11	12	40	7	31	6
Totals	174	307	817	228	394	436	211	330	166	190	304	509	330	499	192

Mineral

[illegible]

No

No.		1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900				
Tonopah No. 1	145	51	143	52	74	103	151	97	139	143	25	88	59	174	64	162
Tonopah No. 2	112	76	146	64	82	132	182	119	119	102	21	125	59	171	91	172
Tonopah No. 3	121	87	206	79	126	181	143	145	120	121	20	142	98	227	118	256
Tonopah No. 4	176	87	181	76	106	140	175	143	161	167	19	139	92	231	120	241
Duckwater	6	4	2	2	11	7	5	5	8	9	1	6	6	14	35	72
Round Mountain	47	38	70	18	48	66	51	60	49	49	6	60	68	30	35	14
Manhattan	78	60	118	41	79	95	74	91	74	74	21	89	67	160	40	137
Pioneer	2	12	6	4	4	11	2	11	4	3	2	11	3	12	3	12
Carrara	0	4	3	2	2	1	1	4	0	0	0	4	3	4	0	4
Beatty	26	17	11	12	14	14	23	18	22	23	3	19	9	34	11	41
Belmont	1	16	5	2	6	12	3	13	5	5	0	11	4	17	2	17
Rhyolite	20	12	26	14	14	19	21	17	22	22	4	12	3	35	11	32
Johnnie	3	2	4	3	3	3	3	2	3	3	0	3	8	5	4	6
Springdale	3	4	4	3	6	3	4	3	3	3	0	3	5	7	3	8
Bonnie Clare	0	4	0	2	4	3	0	3	0	0	1	7	0	2	3	4
Current	7	4	7	4	6	5	7	4	5	7	0	7	3	10	3	4
Sharp	3	1	7	0	7	5	3	11	2	2	1	1	7	8	2	7
Golden Arrow	3	5	5	6	6	5	6	4	4	4	0	10	3	12	3	12
Tybo	4	3	5	6	6	5	0	4	0	3	5	2	1	11	10	6
Smoky Valley	3	7	14	8	13	10	3	12	3	3	1	11	9	10	10	6
Jones	23	11	30	8	16	27	20	26	19	16	2	29	10	35	9	28
Edi	3	2	5	5	4	5	4	3	4	3	1	4	4	9	0	6
Edi	3	5	4	1	1	4	0	2	0	4	1	3	1	9	0	2
Edi	0	3	4	1	3	4	0	3	6	3	1	4	5	3	0	10
Edi	2	1	7	1	1	1	1	1	4	5	0	1	5	10	0	6
Edi	5	3	2	2	4	3	6	4	5	4	1	4	3	9	1	8

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

County, and precinct	Inspector of Mines	Regents State University (Long Term)						Regent State University (Short Term)		Constitutional Amendments			
										No. 1	No. 2	For	Against
Ormsby	Atha A. Richie, Socialist	20	125	168	400	138	296	820	167	244	75	27	48
	Ed Ryan, Democrat	31	127	232		75	167	177	100	129	48	27	48
	Andy J. Stinson, Republican												
	H. B. Lind, Progressive												
	James W. O'Brien, Republican												
	John J. Sullivan, Democrat												
	Lloyd B. Thomas, Socialist												
	Robert G. Withers, Democrat												
	John E. Worden, Socialist												
	W. G. Barker, Socialist												
Storey	F. N. Fletcher, Progressive												
	Chas. B. Henderson, Democrat												
	Chas. P. Squires, Republican												
	Totals	51	282	400	138	296	820	167	244	75	27	48	
	Carson City—First Ward	20	125	168	400	138	296	820	167	244	75	27	48
	Carson City—Second Ward	31	127	232		75	167	177	100	129	48	27	48
	Virginia City—First Ward	8	52	100	19	37	109	20	70	88	15	76	151
	Virginia City—Second Ward	9	57	103	24	43	113	24	76	93	16	78	151
	Virginia City—Third Ward	15	76	151	31	88	131	38	51	66	22	34	48
	Gold Hill	6	31	58	13	2	3	2	2	2	2	2	2
Washoe	Truckee River	2	3	3	3	2	3	2	2	2	2	2	2
	Totals	84	199	448	88	296	445	99	249	49	56	23	285
	Reno No. 1	21	88	245	70	202	160	42	157	21	23	35	172
	Reno No. 2	14	71	170	49	124	110	38	108	22	20	32	111
	Reno No. 3	14	51	147	35	104	14	26	113	13	16	15	123
	Reno No. 4	12	43	108	27	71	78	13	73	10	10	21	88
	Reno No. 5	23	71	179	47	129	136	46	109	22	32	31	116
	Reno No. 6	20	83	211	38	133	166	52	124	22	32	34	137
	Reno No. 7	21	57	129	33	91	87	60	67	29	27	25	86
	Reno No. 8	26	82	225	49	172	146	40	146	39	31	155	99
	Reno No. 9	40	122	172	40	111	129	41	98	28	29	29	180
	Reno No. 10	67	131	214	64	157	186	89	147	52	57	33	190
Washoe	Totals	214	883	2450	700	2020	1600	420	1570	210	230	350	1720
	Carson City—First Ward	20	125	168	400	138	296	820	167	244	75	27	48
	Carson City—Second Ward	31	127	232		75	167	177	100	129	48	27	48
	Virginia City—First Ward	8	52	100	19	37	109	20	70	88	15	76	151
	Virginia City—Second Ward	9	57	103	24	43	113	24	76	93	16	78	151
	Virginia City—Third Ward	15	76	151	31	88	131	38	51	66	22	34	48
	Gold Hill	6	31	58	13	2	3	2	2	2	2	2	2
	Truckee River	2	3	3	3	2	3	2	2	2	2	2	2
	Totals	84	199	448	88	296	445	99	249	49	56	23	285
	Reno No. 1	21	88	245	70	202	160	42	157	21	23	35	172
	Reno No. 2	14	71	170	49	124	110	38	108	22	20	32	111
	Reno No. 3	14	51	147	35	104	14	26	113	13	16	15	123
	Reno No. 4	12	43	108	27	71	78	13	73	10	10	21	88
	Reno No. 5	23	71	179	47	129	136	46	109	22	32	31	116
	Reno No. 6	20	83	211	38	133	166	52	124	22	32	34	137
	Reno No. 7	21	57	129	33	91	87	60	67	29	27	25	86
	Reno No. 8	26	82	225	49	172	146	40	146	39	31	155	99
	Reno No. 9	40	122	172	40	111	129	41	98	28	29	29	180
	Reno No. 10	67	131	214	64	157	186	89	147	52	57	33	190

Sparks No. 1	62	77	139	45	130	81	66	95	54	55	23	114	63	122	121	127	57
Sparks No. 2	40	26	119	47	152	76	85	36	48	42	21	127	90	147	115	147	58
Wadsworth	10	26	54	16	66	40	14	27	12	11	9	29	37	50	32	40	18
Olinhouse	2	12	10	0	5	9	13	8	8	3	0	0	4	10	6	8	3
Paul Mountain	8	12	12	8	11	12	15	7	11	10	3	10	10	26	8	23	6
Flanigan	4	4	1	6	4	5	4	1	3	4	1	9	3	8	4	8	2
Cerish	9	33	41	19	40	39	9	29	9	10	9	32	24	44	30	51	10
Salt Marsh	1	11	10	3	6	2	7	6	3	3	2	2	2	9	9	3	1
Leadville	6	12	12	3	13	6	6	2	4	6	3	3	13	9	2	6	1
Duck Lake	5	60	60	23	47	65	13	63	13	12	13	53	36	43	7	12	3
Verdi	3	13	14	3	8	18	1	17	3	2	3	12	4	7	13	11	7
Franktown	2	13	37	3	23	23	6	11	3	4	4	15	26	17	26	13	20
Buffalora	1	12	23	3	16	23	1	17	1	1	4	23	5	14	20	14	9
Washoe																	
Totals	388	1117	2402	675	1811	1774	673	1517	468	471	382	1716	1010	1449	2047	1662	923

White Pine

Ely No. 1	68	102	123	57	103	129	70	104	61	72	18	118	70	158	112	160	54
Ely No. 2	42	84	124	47	168	121	53	101	43	43	16	108	70	139	101	143	50
Oscolla	5	11	22	17	30	15	6	13	6	5	2	11	33	36	9	36	5
Cherry Creek	8	23	47	9	22	19	9	40	3	6	3	44	21	53	13	41	6
Snake Valley	0	0	1	9	21	8	1	13	0	2	3	15	1	32	2	29	8
Newark	7	11	17	5	12	8	3	22	0	7	2	21	7	36	2	6	2
Preston	4	17	19	4	17	10	9	11	3	4	0	9	7	13	6	11	3
Irish City	6	17	26	8	16	23	6	22	9	9	3	21	13	37	14	39	10
Hamilton	1	24	22	6	24	25	2	27	1	1	0	22	21	36	7	35	2
Rund	6	6	1	0	1	6	1	6	6	1	0	1	4	12	0	5	1
Round Mountain	2	7	7	1	7	6	4	5	2	2	2	5	4	19	1	5	1
Mary	20	62	37	17	35	59	27	47	24	25	2	54	27	71	33	57	23
Ruth	39	98	48	43	81	68	41	49	40	51	0	56	57	117	60	97	30
Ely City	0	8	4	1	4	5	0	6	1	0	0	4	5	17	4	4	1
Pleasant Valley	3	8	11	1	12	13	2	8	3	2	0	12	9	2	13	3	3
Smelter	108	150	172	100	183	160	102	198	84	102	90	126	156	269	130	253	54
Timber	0	0	6	3	10	12	7	0	6	0	1	1	10	5	4	16	1
Taft	7	10	10	5	6	1	7	11	6	6	1	10	10	16	5	6	2
Kimberly	10	22	12	8	18	31	11	17	10	10	3	25	14	25	18	21	12
Totals	343	682	734	351	694	761	368	646	311	362	95	663	548	1771	203	166	977

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, First Judicial District

County, and precinct	F. P. Langen, Democrat	No opponent.
Douglas		
East Fork	188	.....
Genoa	56	.....
Jacks Valley	16	.....
Mottaville	36	.....
Ormsby		
Carson City, First Ward	189	.....
Carson City, Second Ward	248	.....
Storey		
Virginia City, First Ward	110	.....
Virginia City, Second Ward	108	.....
Virginia City, Third Ward	191	.....
Gold Hill	82	.....
Truckee River	6	.....
Total	1230	.....

Judges, Second Judicial District

County, and precinct	James Glynn, Democrat	D. H. Hartson, Progressive	T. F. Moran,* Republican	A. N. Salisbury, Republican	R. C. Stoddard,* Democrat
Washoe					
Reno No. 1	89	11	210	201	132
Reno No. 2	88	4	154	123	119
Reno No. 3	86	8	134	98	129
Reno No. 4	50	7	103	60	76
Reno No. 5	110	2	156	93	144
Reno No. 6	132	9	137	124	167
Reno No. 7	63	7	122	89	96
Reno No. 8	100	21	214	123	168
Reno No. 9	94	9	154	106	123
Reno No. 10	151	17	234	154	188
Sparks No. 1	74	14	177	103	99
Sparks No. 2	67	15	223	140	89
Wadsworth	19	1	70	49	33
Olinghouse	6	0	9	9	6
Bald Mountain	13	4	11	16	15
Flanigan	3	0	10	3	13
Gerlach	20	8	39	44	38
Salt Marsh	4	2	11	8	0
Leadville	5	5	5	6	10
Duck Lake	5	0	18	12	4
Verdi	39	12	84	57	47
Franktown	7	1	13	7	9
Huffakers	8	2	39	27	17
Washoe	6	5	18	17	21
Totals	1235	164	2345	1670	1742

*Elected.

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 191

Judge, Third Judicial District

County, and precinct

Eureka	
Eureka.....	.....
Ruby Hill.....	.....
Garrison.....	.....
Beowawe.....	.....
Palmade.....	.....
Mineral Hill.....	.....
Alpha.....	.....
Prospect.....	.....
Buckhorn.....	.....
Lander	
Austin, Ward No. 1.....	.....
Austin, Ward No. 2.....	.....
Argenta.....	.....
Copper Canyon.....	.....
Hilltop.....	.....
Lander.....	.....
Cortes.....	.....
Totals.....	.....
Majority.....	.....

Judge, Fourth Judicial District

County, and precinct

Elko	
Bryan.....	.....
Carlin.....	.....
Clover Valley.....	.....
Columbia.....	.....
Cloverdale.....	.....
Contact.....	.....
Elko No. 1.....	.....
Elko No. 2.....	.....
Fort Halleck.....	.....
Halleck.....	.....
Huntington.....	.....
Island Mountain.....	.....
Jack Creek.....	.....
Jarbridge.....	.....
Lamoille.....	.....
Mardis.....	.....
Metropolis.....	.....
Midas.....	.....
Mountain City.....	.....
Montello.....	.....
Mound Valley.....	.....
North Fork.....	.....
North Ruby.....	.....
O'Neil.....	.....
Railroad.....	.....
Ruby Valley.....	.....
Star Valley.....	.....
South Fork.....	.....
Sprucemont.....	.....
Shafter.....	.....
Tecoma.....	.....
Tobar.....	.....
Toano.....	.....
Tuscarora.....	.....
White Rock.....	.....
Wells.....	.....
Welland.....	.....
Total.....	.....

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, Fifth Judicial District

County, and precinct	H. H. Atkinson, Republican	Mark R. Averill, Independent	Wm. Forman, Democrat	J. E. McNamara, Socialist
Nye				
Tonopah No. 1	8	150	78	38
Tonopah No. 2	10	186	73	61
Tonopah No. 3	9	237	96	73
Tonopah No. 4	15	238	77	114
Duckwater	2	10	6	5
Round Mountain	8	34	67	45
Manhattan	13	95	78	69
Pioneer	1	13	5	1
Carrara	0	5	2	0
Beatty	2	24	12	17
Belmont	0	11	9	1
Rhyolite	7	25	9	17
Johnnie	1	2	3	3
Springdale	2	5	3	2
Bonnie Clare	1	1	3	0
Currant	1	8	3	5
Sharp	3	6	1	1
Golden Arrow	0	2	12	4
Tybo	0	7	5	0
Smoky Valley	2	12	7	3
Ione	0	18	29	16
Lodi	2	5	3	2
Goldyke	0	9	3	2
Sunnyside	1	4	1	0
Blue Eagle	4	4	1	2
Ash Meadows	0	1	2	6
Nyala	1	6	1	4
Totals	98	1118	588	551
Plurality		580		

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, Sixth Judicial District

County, and precinct	E. A. Ducker, Democrat	No opponent
Humboldt		
Winnemucca.....	198	-----
West Winnemucca.....	194	-----
Lovelock.....	327	-----
Spring Valley.....	9	-----
Rochester.....	101	-----
Lower Rochester.....	66	-----
Golconda.....	63	-----
Clover Valley.....	8	-----
Paradise.....	101	-----
Willow Point.....	9	-----
McDermitt.....	17	-----
Rebel Creek.....	18	-----
Amos.....	11	-----
Mill City.....	6	-----
Imlay.....	78	-----
Humboldt.....	8	-----
Jungo.....	12	-----
Sulphur.....	10	-----
Pueblo.....	12	-----
Virgin.....	4	-----
Bartlett Creek.....	0	-----
National.....	68	-----
Dun Glen.....	6	-----
Kennedy.....	10	-----
Unionville.....	17	-----
Masuma.....	64	-----
Vernon.....	7	-----
Jackson Creek.....	12	-----
Oreana.....	21	-----
Star Peak.....	16	-----
Goldbanks.....	8	-----
Rye Patch.....	0	-----
Total.....	1476	-----

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, Seventh Judicial District

County, and precinct	W. D. Hutton, Progressive	Aurelius Tilden, Independent	J. Emmett Walsh, Democrat
Esmeralda			
Goldfield, Ward No. 1	81	82	89
Goldfield, Ward No. 2	164	65	143
Goldfield, Ward No. 3	90	60	80
Goldfield, Ward No. 4	74	79	89
Goldfield, Ward No. 5	89	54	81
Blair	20	13	26
Columbia	52	13	25
Coaldale	2	0	3
Fish Lake	4	6	9
Gold Mountain	3	4	2
Horn Silver	2	4	10
Lida	12	9	4
Mary Mine	5	1	20
Millers	27	45	41
Silver Peak	2	5	2
Mineral			
Pine Grove	0	0	0
Rockland	3	0	3
Cambridge	5	10	16
Sweetwater	9	1	13
Aurora	34	43	76
Mangum	16	5	21
Luckyboy	6	0	12
Hawthorne	28	8	78
Gillis	1	6	4
Schurz	5	7	17
Rand	2	2	5
Rawhide	21	23	63
Luning	24	3	33
Mina	16	27	60
Sodaville	5	3	11
Douglass	1	2	2
Belleville	6	1	12
Candelaria	0	0	0
Sunland	2	1	9
Queen	5	5	10
Totals	814	577	1079
Plurality			265

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 191

Judge, Eighth Judicial District

County, and precinct	
Churchill	
New River No. 1.....	.....
New River No. 2.....	.....
Hasen .....	.....
Labontan .....	.....
St. Clair .....	.....
Stillwater .....	.....
Terrill .....	.....
Fairview .....	.....
Wonder .....	.....
White Rock .....	.....
Lyon	
Mason Valley .....	.....
Spragg .....	.....
Plummer .....	.....
Wabnska .....	.....
Thompson .....	.....
Ludwig .....	.....
Smith Valley .....	.....
Simpson .....	.....
Buckskin .....	.....
Dayton .....	.....
Mound House .....	.....
Silver City .....	.....
Canal .....	.....
Totals .....	.....
Plurality .....	.....

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, Ninth Judicial District

County, and precinct	A. I. Haight, Republican.....	James M. Lockhart, Independent.....	C. J. McFadden, Democrat.....
White Pine			
Ely No. 1.....	92	62	133
Ely No. 2.....	87	63	108
Osceola.....	16	22	13
Cherry Creek.....	32	12	33
Snake Valley.....	12	16	11
Newark.....	2	2	5
Preston.....	22	1	15
Lane City.....	5	4	8
Hamilton.....	13	11	25
Lund.....	19	0	30
Ruby Mountain.....	0	1	1
Melvin.....	6	5	4
Ruth.....	42	24	48
Ely City.....	37	73	68
Pleasant Valley.....	3	0	7
Muncy.....	4	0	18
Smelter.....	191	86	149
Tippett.....	3	4	0
Taft.....	2	5	19
Kimberly.....	14	17	22
Totals.....	602	408	719
Plurality.....			117

OFFICIAL RETURNS OF THE ELECTION HELD NOVEMBER 3, 1914—Continued

Judge, Tenth Judicial District

County, and precinct	Chas. Lee Horey, Independent.....	H. M. Lillie, Republican.....	O. J. Van Pelt, Democrat.....
Clark			
Nelson.....	10	18	11
Searchlight.....	15	36	25
Crescent.....	0	9	4
Good Springs.....	18	41	22
Arden.....	0	9	0
Las Vegas.....	56	288	138
Indian Springs.....	1	10	1
Moapa.....	6	7	21
Logan.....	11	3	13
Overton.....	22	24	13
St. Thomas.....	15	5	13
Bunkerville.....	3	14	27
Mesquite.....	0	14	22
Lincoln			
Pioche.....	159	6	24
Caliente.....	94	19	25
Alamo.....	24	4	6
Hiko.....	10	3	0
Deer Lodge.....	5	3	3
Elgin.....	9	4	0
Clover Valley.....	8	0	2
Eagle Valley.....	10	3	4
Atlanta.....	15	1	1
Jack Rabbit.....	12	0	0
Lake Valley.....	8	1	0
Spring Valley.....	9	0	1
Panaca.....	57	4	9
Totals	577	526	385
Plurality	51		

SUMMARY OF THE VOTE

Offices, and Names of Candidates	Counties																Majorities or Pluralities
	Churchill	Clark	Douglas	Elko	Esmeralda	Eureka	Humboldt	Lander	Lincoln	Lyon	Mineral	Nye	Ormsby	Storey	Washoe	White Pine	Totals
<i>United States Senator—</i>																	
A. Grant Miller, S.	361	201	61	426	727	69	631	148	80	228	240	881	83	48	759	510	5,451
Francis G. Newlands, D.	406	447	130	824	594	171	777	227	294	317	322	860	280	348	1508	611	8,078
Samuel Platt, R.	389	315	246	848	461	249	652	211	184	477	277	683	343	340	1744	669	8,088
<i>Representative in Congress—</i>																	
Leonard B. Fowler, D.	353	347	162	812	652	139	780	218	281	375	310	770	284	320	1596	633	8,081
E. E. Roberts, R.	475	419	244	898	542	277	777	238	191	456	296	752	357	353	1892	748	8,915
Martin J. Scanlan, S.	309	177	29	364	559	68	454	119	77	178	211	836	61	24	442	386	4,284
<i>Justice of Supreme Court—</i>																	
Ben W. Coleman, D.	470	513	123	851	1064	171	1054	260	366	384	387	1070	231	288	1656	1201	10,069
Benj. F. Currier, R.	568	892	296	1128	541	301	828	287	159	551	361	940	454	383	2120	502	9,811
<i>Governor—</i>																	
Emmet D. Boyle, D.	398	447	117	909	710	156	995	261	320	443	335	847	300	348	2247	790	9,623
W. A. Morgan, S.	248	150	37	308	438	42	335	88	60	138	138	677	52	21	312	297	3,391
Tasker L. Oddie, R.	502	354	283	885	623	292	676	239	173	431	360	865	357	331	1460	705	8,537
<i>Lieutenant-Governor—</i>																	
W. H. Burton, S.	298	183	44	359	446	50	443	112	72	182	167	726	55	35	411	338	3,917
J. Lozano, R.	390	297	213	727	326	236	634	179	146	384	224	684	299	297	1423	624	7,083
Maurice J. Sullivan, D.	442	468	165	963	989	192	931	275	320	496	425	925	341	355	2119	792	10,128
<i>Secretary of State—</i>																	
George Brodigan, D.	565	553	236	1118	1086	249	1090	313	350	540	563	1234	429	375	1680	855	11,236
A. W. Holmes, R.	472	353	184	822	547	219	768	217	169	402	215	840	254	305	2087	799	8,553
<i>State Controller—</i>																	
George A. Cole, D.	551	518	98	704	1060	199	1029	279	362	421	518	1308	209	358	1747	920	10,274
Jacob Eggers, R.	466	379	821	1263	554	264	887	255	159	499	249	761	481	313	1989	741	9,536
<i>State Treasurer—</i>																	
Ed Malley, D.	566	548	142	1105	1154	263	1104	385	394	431	517	1343	285	328	1773	1012	11,350
Wm. McMillan, R.	490	377	275	842	496	216	785	167	151	514	259	867	404	360	2033	674	8,910
<i>Surveyor-General—</i>																	
Chas. L. Deady, D.	524	528	185	1133	1006	191	1169	330	337	470	479	1168	340	275	1479	895	10,509
Matthew Kyle, R.	481	848	229	807	570	274	694	210	187	452	262	853	854	399	2291	764	9,183
<i>Superintendent of Public Instruction—</i>																	
J. F. Abel, R.	694	355	192	894	575	268	1010	252	187	564	353	911	859	440	1845	776	9,375
John Edwards Bray, D.	339	544	222	1056	1050	210	923	301	336	371	397	1184	832	244	1971	912	10,342

Superintendent of State Printing—

Joe Fairworth, D.

Fred R. Trimmer, P.

Attorney-General—

Richard A. McKay, R.

George Springmeyer, P.

Geo. E. Thatcher, D.

Clerk of Supreme Court—

Joe Josephs, D.

Inspector of Mines—

A. A. Richie, S.

Ed. Ryan, D.

Andy J. Stinson, R.

University Regents, Long Term—

H. E. Lutz, P.

James W. O'Brien, R.

John J. Sullivan, D.

Lloyd H. Thomas, S.

Robert G. Withers, D.

John E. Worden, S.

University Regents, Short Term—

W. G. Fletcher, S.

F. N. Fletcher, P.

Chas. B. Henderson, D.

Charles P. Sturges, R.

Constitutional Amendment No. 1 (Suffrage)—

For the amendment

Against the amendment

Constitutional Amendment No. 2 (Official Oath)—

For the amendment

Against the amendment

683	623	282	1451	1147	302	1347	402	414	671	582	1463	550	564	2895	1154	14,490	9,952
236	246	134	384	383	133	464	123	72	231	143	513	126	114	761	435	4,538	
252	262	54	504	276	127	373	99	109	216	133	384	77	118	729	504	4,207	
232	192	242	434	462	109	641	157	86	340	257	640	303	240	1410	322	6,017	
502	466	128	994	881	236	1014	302	355	383	385	1116	238	328	1713	839	9,940	3,923
743	723	290	1477	1341	326	1321	316	394	711	627	1661	474	424	3042	1315	15,185	(*)
374	177	88	350	509	55	422	115	52	174	208	804	51	34	388	343	4,092	
320	111	85	727	953	122	763	137	371	307	293	517	262	139	1117	682	7,014	
433	324	311	953	579	303	804	284	117	517	335	1030	400	448	2402	734	9,944	2,980
231	174	99	291	424	94	384	107	64	228	153	407	138	88	675	351	3,938	
406	341	201	734	463	249	393	122	167	324	243	644	266	293	1911	684	7,798	141
410	406	122	924	653	194	846	243	296	436	323	851	350	445	1773	781	9,105	1,335
297	203	156	408	505	76	496	143	81	211	268	844	167	96	673	368	4,827	
346	351	115	303	698	143	672	134	255	330	258	804	241	243	1517	648	7,627	
311	177	54	436	498	62	430	100	57	165	177	765	75	49	463	311	4,136	
285	169	49	350	501	53	433	101	67	190	197	786	74	56	471	362	4,144	
76	73	29	80	125	32	134	42	19	78	57	136	30	28	382	95	1,115	
396	376	140	1109	673	207	529	262	270	353	309	804	304	285	1716	669	8,702	3,326
300	288	161	420	363	143	443	114	146	304	171	496	221	269	1010	548	5,376	
596	659	198	1161	1089	175	1096	333	393	509	454	1294	236	293	1449	1071	10,986	3,678
375	214	178	700	576	223	426	124	81	330	225	637	377	324	2047	521	7,253	
507	596	188	934	929	188	301	276	349	499	351	1296	331	278	1662	986	10,161	6,491
180	126	98	372	311	106	193	79	35	192	157	290	178	153	923	275	3,670	

*Mr. Josephs had no opponent.

Highest Total Vote (United States Senator).....21,567



AMENDMENTS TO THE ELEMENTARY COURSE OF STUDY

¶Readjusting and eliminating some work in the grades and providing for the introduction of Elementary Bookkeeping as required by law

¶Specifically limiting the number of daily recitations in the rural schools



Adopted by the State Board of Education August, 1914



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT

1914

FOREWORD

The present course of study for the elementary schools was adopted in 1912, one year after the action of the State Text-Book Commission in adopting new books. Though but two years old, so rapidly has school need and sentiment grown that a thorough revision in the near future, along lines relating the school to the home and to the industries of community life, seems imperative.

The State Board of Education considers, however, that it would be unwise to anticipate the action of the State Text-Book Commission, which meets in June, 1915, by attempting a full revision now, as such revision could not be properly made without definite knowledge as to changes that may then occur in textbooks. And, in this connection, it may be added that this Board wishes to go on record as favoring no material change for the next four years in the textbooks now in use.

The purpose of such amendments as have been made herein is twofold:

1. To make an opening for the introduction of Elementary Bookkeeping in the upper grades of the rural schools.

Work in elementary bookkeeping is now required by law for the seventh and eighth grades. This year, and until the Course of Study is revised, it will be possible to introduce it fully into the eighth grade only. However, the first half of the work in bookkeeping as outlined may be done by the seventh grade, and this in combination with the eighth grade.

To introduce bookkeeping now, room has been made in the eighth grade by readjustment of the work therein, as will be seen in this pamphlet of amendments.

2. To limit the number of recitation periods in the rural schools.

Many of the one-teacher schools with but six grades or less have been having twenty-seven recitation periods or more daily. Limitation as to number is necessary, evidently, as the shortness of time in these schools (as programs are at present arranged by the teachers) precludes needed classwork and instruction. Fewer recitations per week, with sufficient time in each to assign the lesson properly and to have necessary illustrations of work in hand, would be far better than having the full five per week. The period of each is so short that the inertia of starting is hardly overcome before the end of the period arrives. Lost motion and inefficiency inevitably result. And, in part, because of the very shortness of the recitation, lessons are improperly assigned, and many pupils grope in darkness in the preparation of their work.

While these amendments are intended mainly for the rural schools (those having less than three teachers), any school may use them; and all schools having seventh and eighth grades are required to use them unless specially excepted by the State Board of Education.

Deputy Superintendents are hereby instructed promptly to supply the schools with this pamphlet of amendments as soon as received from the State Superintendent of Public Instruction; and they will see that the same are properly observed and carried out in the schools.

STATE BOARD OF EDUCATION.

CARSON CITY, August, 1914.

AMENDMENTS TO THE COURSE OF STUDY

I. PHYSIOLOGY, CIVICS, AND HISTORY

1. Physiology:

Drop physiology from the eighth grade. There will be no final examination in this subject for the eighth grade during the present school year, except as hereinafter provided. (See 4 below.)

2. Civics:

Teach civics incidentally with United States history throughout the seventh grade and through the first half of the eighth grade, covering, in the eighth grade, substantially, the "Outline of State and County Government," as found on pages 104, 105, 106, 107, and 108 of the present Course of Study. Leaflets will probably be sent out by the Department of Education during the school year more definitely limiting and defining the work in civics.

Omit entirely "United States Government" outline on pages 108, 109, 110 of the present Course of Study.

Such general knowledge, however, of the departments of the United States Government as is given in the body of the history text-books should be gained in the classwork in history; and every teacher should see that this is properly brought out.

The pupils shall have no text-books in civics, but the teacher shall have, as guide: Clark's "The Government; What It Is; What It Does" (American Book Company. 75 cents); or Forman's "Essentials in Civil Government" (American Book Company. 60 cents); or Hewitt's "Civil Government" (H. R. Pattengill, Lansing, Michigan. 25 cents).

The eighth-grade examination in civics will be given in connection with that in history, and will constitute about one-fifth part thereof.

3. United States History:

Omit all intensive study of wars and war campaigns and all intensive study of the colonies under "Permanent English and French Settlements" in the text-books, except that of Virginia, Massachusetts, Rhode Island, and Maryland, which are typical.

In all city and village schools, and in all rural schools (those having less than three teachers) running eight months or more, the history shall be finished as designated in the Course of Study—at the end of the first semester of the eighth grade or year.

4. Physiology:

In the seventh grade, *two recitations per week* throughout the school year, text-book (Jewett's "The Body and Its Defenses") in the hands of the pupils. Combine fifth, sixth, and seventh grades for oral instruction and discussion, *one period per week*, throughout the school year, according to outline for these grades in the Course of Study on page 82.

Ritchie's "Sanitation and Physiology" shall be in the hands of the teacher only. Final examination in physiology will be given by the State for the seventh grade.

II. ARITHMETIC AND GEOGRAPHY

1. Arithmetic:

(a) In all grades, beginning with the fourth, especially observe the following positive regulations found under "Fourth Grade," pages 69 and 70 of the Course of Study:

Chapter IV of the text is the basis for the work of this grade. The main requirements at the close of the fourth school year (or grade) are that the class shall be able (1) to read and write numbers easily to the fourth period; (2) to add and subtract numbers accurately and rapidly; (3) to multiply or divide any number by another number of at least three digits, and obtain correct answers in reasonable time; (4) to be able to give good analyses for the problems found in Chapter IV of the text.

The following general forms for unitary analysis are recommended for use in this and succeeding grades:

(1) If 1 marble costs 2 cents, how much will 20 marbles cost? Analysis: Since 1 marble costs 2 cents, 20 marbles will cost 20 times 2 cents, or 40 cents.

(2) John paid 40 cents for 20 marbles. What was the cost of each marble? Analysis: Since 20 marbles cost 40 cents, 1 marble will cost as much as 20 is contained times in 40 cents, or 2 cents.

(3) If there are 150 firecrackers in three bunches, how many are there in 5 bunches? Analysis: Since there are 150 firecrackers in 3 bunches, in 1 bunch there are as many as 3 is contained times in 150, or 50 firecrackers. And 5 bunches will contain 5 times 50, or 250 firecrackers.

In teaching long division, follow the method and directions found in pages 178, 179, 180, and 181 of the text. Teach the pupils to test their work before leaving it, and insist upon their doing this. See that your pupils understand how to find the quotient figures when there are two or more figures in the divisor. The rules on pages 180, 183, 184, and 185, if mastered and rightly and sufficiently illustrated, will be very serviceable. Give these your close attention.

Those parts of the book called "Oral Arithmetic" are to be especially emphasized. Much time should be given to oral outlining of the solution of written exercises before doing the written work. Remember that the oral work is introductory to the written.

The class is to be drilled at least five minutes each day on rapid oral work in the fundamentals. In schools of five or more grades, the fifth and sixth grades should take this drill work with the fourth grade. In these exercises use flash-cards, blackboard, etc.

(b) Study carefully the general introduction to this branch in the

Course of Study, as well as the discussion of the work in each grade. Many teachers are failing to do this, and are not getting the desired results required by the State Board of Education.

(c) Especially note the following found under "Eighth Grade" in the Course of Study, pages 75 and 76:

Study carefully the introduction to arithmetic in this course of study; also the note on analysis under sixth grade; and the note on solution under seventh grade.

Since this grade begins with exercises in percentage, turn to the directions in the sixth grade and follow the forms for percentage problems found there. Do not allow forms of analysis that cannot be easily understood by the pupils. Do not use the form shown in problem 1, page 254. See note on analysis under sixth grade in this course of study.

Have pupils review and enlarge upon work of the seventh grade in Interest and other subjects. See, in this connection, suggestions on Interest under seventh grade in this course of study. Do not spend much time on Partial Payments. Two days is sufficient for an average class. One day is sufficient time on Compound Interest. Teach the principles and definitions in Stocks and Bonds, Life Insurance, Property Insurance, and Exchange, and problems that can be solved mentally. Procure for and show to your pupils samples of stock shares and of bonds; also blank insurance policies, etc.

Omit the following: Drill Tables; Borrowing Money from Banks; Exact or Accurate Interest; The Metric System; Cube Root problems, except those that can be solved mentally; problems in finding the surface and volume of cones and spheres, and the volume of pyramids; and all problems—other than mental—in Stocks and Bonds, Life Insurance, Property Insurance, and Exchange.

See to it that the pupils of this grade are able to cope with the ordinary problems of local conditions, as suggested in work of sixth and seventh grades. Make an effort to adapt each new topic in the text to the work of the community. Do not be afraid to go to the local farmer, banker, merchant, or mine foreman for information that you wish to present to the class. The best way possible to make the school work popular with the community, is to show that you are teaching children to be useful as citizens.

(d) Paragraphs 3 and 7, under Seventh Grade, pages 73 and 74 of the Course of Study, are changed to read as follows:

Par. 3: The 6% method and the cancelation method are suggested, the former for the solution of the problem, and the latter for checking the result. See the Six per cent Method, on pages 75, 78, 265, and 266 of the Southworth-Stone text.

Par. 7: Before leaving this subject, pupils should be able to solve each problem in interest computations, and prove the work by going over it

a second time, all within three minutes; or, preferably, the proof may be made by the cancellation method as shown below.

(e) The illustration of the solution by the "Six per cent Method" and its proof by the "Banker's Method" found at the bottom of page 74 of the Course of Study is amended so as to stand as follows:

Illustration

Problem: Find the interest on \$1,000 for 5 years, 2 months, and 15 days, at 8%.

QUICK SOLUTION

(Six per cent Method)
(Interest on \$1 for full time at 6% is to be set down at sight.)
\$.3125 Int. on \$1 at 6%
1000
\$312.50 Int. on P. at 6%
\$104.166 Int. on P. at 2%
\$416.67 Int. on P. at 8%

(Cancellation Method)
(For checking)
(Reduce years, months, and days to months.)
3 | \$1000
12^a | .02
| .08^a
| 62.5
| 62.50
| 20
| 1,250.00
\$416.67

^aItalic figures denote cancellations.

(a) Use round numbers for principal in interest computations for all practice work for quick solution. (b) Observe brevity in labeling in Six per cent Method. (c) No labeling is required in the cancellation method as used above. Principal \$1000, rate .08, time in months 62.5, all placed to the right of the vertical line as factors, if divided by 12 (months) at the left of the vertical line should and does give same result as the Six per cent Method, 30 days being considered an interest month. Factors common to the two sides are canceled and operations completed.

(f) The teacher should note the definitions in the "Appendix" of the Southworth-Stone Arithmetic, and see that the pupils know them as these definitions apply in the work of the fifth, sixth, seventh, and eighth grades. The teacher should herself frequently use these terms in appropriate connections in discussing problems, and accustom her pupils to their use and meaning, thus making them a part of each pupil's vocabulary.

2. Geography:

The State Board of Education is not prepared, at this time, to make the desired changes and eliminations in the course of study in geography, in order to provide for the completion of this subject in the seventh grade.

For the school year 1914-15 it is suggested that less stress, than heretofore, be laid on the formal work in the study of the continents of South America, Africa, and Asia.

In all city and village schools, and in all rural schools (those having less than three teachers) running eight months or more, the geography shall be finished as designated in the Course of Study—at the end of the first semester of the eighth grade or year.

III. ELEMENTARY BOOKKEEPING**Bookkeeping:**

Place elementary bookkeeping in the eighth grade. "Principles of Bookkeeping and Farm Accounts" (Bexell and Nichols) is recommended by the State Board of Education as the text-book for the work. Give two periods or recitations, *per week, throughout the school year*, periods not to be less than thirty minutes each. This text may be purchased from the American Book Company.

The text-book shall be in the hands of the teacher. Text-books for the pupils are optional with the teacher and the Board of School Trustees, in each district, as no text for elementary bookkeeping has been designated by the Text-Book Commission.

Material for the work shall be furnished by each district having seventh- and eighth-grade pupils.

The work embraces: (a) Ruling and Preparing Forms; (b) Private Personal Accounts; (c) Students' Accounts; (d) Household Accounts; (e) Poultry Account, including Financial Statement thereof; (f) Debits and Credits, including Model Set; (g) Livestock Set; (h) Produce Set; (i) Bills Receivable and Bills Payable; (j) Banking; (k) Business Letters; (l) Business Forms; and Farm Accounts.

Teachers are expected to cover, at least, as far as "Farm Accounts," page 91.

For Combinations of Classes, see next page.

IV. COMBINATIONS OF CLASSES

(Rural school having eight grades under one teacher)

	<i>Eighth Grade 8</i>	<i>Seventh Grade 7</i>	<i>Sixth Grade 6</i>	<i>Fifth Grade 5</i>	<i>Fourth Grade 4</i>	<i>Third Grade 3</i>	<i>Second Grade 2</i>	<i>First Grade 1</i>
General Exercises	Once a week with all grades.							
Reading.....	3	3	5	5	5	5	20	20
	Combine.			Combine.				
Spelling.....	5	5	5	5	5	5	See Course of Study. With Reading.	
	Double.		Double.		Double.			
Grammar and Language..	3	3	3	3	3	3	With Reading.	
				Combine.				
Arithmetic and Numbers..	3	3	3	3	3	3	3	Incidentally.
						Combine.		
History and Civics.....	3 $\frac{1}{2}$	3	3	3	3	0	0	0
				Combine.				
Geography	2 $\frac{1}{2}$	3	3	3	3	0	0	0
				Combine.				
Writing	3	3	3	3	3	3	3	3
	Combine all classes.							
Drawing	2	2	2	2	2	2	2	2
	Combine all classes.							
Music	1	1	1	1	1	1	1	1
	See Course of Study.				Combine all classes.			
Physiology	0	2 in text.	1	1	Drop, except incidentally.			
	Combine once a week.							
Bookkeeping	2	For seventh grade, see introduction to outline of work in elementary bookkeeping.						

(a) Numerals designate the number of recitations per week throughout the school year, or such part of a school year as is designated by fractions under eighth-grade geography and history. Under spelling, hear two classes at the same time, pronouncing words for the respective classes. This doubling of school work may also be arranged for the board work of the arithmetic classes.

(b) In a one-teacher school of eight grades, the maximum number of daily recitations shall be 28. Arrange program accordingly by consulting table for "Combinations of Classes" given above for eight grades.

(c) In a one-teacher school of seven grades, the maximum number of daily recitations shall be 24. Arrange program accordingly by consulting table for "Combinations of Classes" given above for eight grades, making other combinations necessary.

(d) In a one-teacher school of six grades or less, the solution of a daily program is a simple matter.



ANNOUNCEMENT

VIRGINIA CITY SCHOOL OF MINES

**¶ A School of the Science of Practical Utility for
the Laboring Man, Miner, Millman, and Prospector**



THE VIRGINIA CITY SCHOOL OF MINES

The School is intended alike for the man of limited education and the one having a fair schooling who desires to have sufficient technical skill to do whatever presents itself in the capacity of superintendent, overseer, foreman, surveyor, draftsman, millman, assayer, or prospector, either for himself or for others, and there is not imposed any requirement for entrance beyond that of being able to read and write the English language. Those who can give satisfactory evidence of having had the equivalent of a part of a course may be passed to the part following, with, perhaps, a review. It is preferred that he who makes application will inform himself of the nature of the courses and that which is prescribed, in order that he may know what there is for him to do. Whatever experience he may have had from former occupation in any part of the field of mining, or may be having in his present capacity, is regarded as being of importance to him by making him familiar with details. For example, suppose he has been a prospector, a foreman, or a helper in an assay office, the experience he has gained therefrom will be of assistance to him in the School and also to him more than ever after completing his course, but he cannot reasonably expect such experience to be accepted as a substitute for any portion of a course, for reasons that will subsequently appear in the descriptions and illustrations of the subject-matter of each course to be given presently. The courses are designed for those persons having motives that cause them to desire to acquire skill that may be justly claimed to be a resource, entirely within their possession, whereby they may be largely independent of other people for results in a position which they may accept from others or in an undertaking of their own. The character of the courses is nearly the same in the case of one as another, and is indicated in this pamphlet by means of illustrations, not necessarily of special selection, and by descriptions. It should be said, in so doing, there is no pretense of showing the limitations of their usefulness, since that will be discovered by those whose attention is engaged in them. To him who takes the courses, the way is shown and much will accrue to his advantage from his individuality which he brings ready made. This statement should not occasion alarm, if some there be in whom it arouses a suspicion of fear, which is apt to be more of an apprehension than real. But, in the account that follows, the attention is directed to the features of utility that appear as familiarity with the courses develops.

COURSES OF INSTRUCTION

- | | |
|------------------|------------------------|
| I. MATHEMATICS | IV. MECHANICAL DRAWING |
| II. PHYSICS | V. ASSAYING |
| III. SURVEYING | VI. CYANIDING |
| VII. PROSPECTING | |

I. MATHEMATICS

- | | |
|------------------------|-------------------------|
| 1. Arithmetic | 3. Plane Geometry |
| 2. Algebra (a) and (b) | 4. Descriptive Geometry |
| 5. Plane Trigonometry | |

1. ARITHMETIC. Special emphasis is placed upon this subject and particular care is exercised in setting forth the reasons for its operations. Factors, multiples, fractions, decimals, metric system, measures, percentage, proportion, and roots are completed. Some exercises are given, at first, in writing numbers in a different base or radix than that of ten. This is done and has the effect of producing greater activity in dealing with numbers. The common base of ten came into general use in early times and was accepted more from usage than fitness would seem to indicate, hence, for example, the impossibility of reducing so many common fractions to perfect decimals. However, these first exercises awaken an insight into numbers that ordinarily is never had and which is certainly quite necessary to a foundation. Every operation in arithmetic is deemed in need of proof rather than the learning of a series of operations to be performed mechanically. A knowledge of the subject is thus more quickly acquired and its use more frequently and extensively employed by the individual. The following are deemed in need of proof, namely, the rule for placing the decimal point, what constitutes the highest common factor, the least common multiple, the relation of whole numbers to fractions, why certain fractions cannot be reduced to perfect decimals, the process of extracting the square and cube roots, and the mean and extreme rule in proportion. The operations are then performed from the reasons instead of the rule in the memory.

2. ALGEBRA. This subject is concluded with logarithms. Some of the first exercises in this subject can be done as readily by arithmetic as by methods of its own, and owing to this fact the transition is easily made from the arithmetic into the algebra. The student thus, at first, uses more and more of its methods and less and less of those that are distinctly of arithmetic. It is not to be inferred that the student discards the arithmetic in this process of transition, but rather that he retains the arithmetic, and it gives him an advantage that serves to

devices of algebra have decidedly expanded the range of quantity to an extent quite unknown in arithmetic. It regards quantities that are negative as well as those that are positive, the latter being the only ones considered in arithmetic, and by so doing it recognizes a position for a common zero for both kinds of quantity. And quantities may change in value and yet maintain a fixed relation to one another, and as such they are algebraical, and for this reason algebra becomes the language of formulas, whether they be those used by the cyanide man, surveyor, builder, superintendent, or contractor. Not only has it to do with the applicability of formulas, but it can be made to do the reverse duty, namely, the building up of a formula from one set of conditions to serve when those conditions have changed or varied. Algebra partakes of some of the properties of geometry, and for this reason much of what are constituted in its results is capable of geometrical interpretation. Let us refer to Figure 1 (page 8): $y=x+2$ and $y+2x=14$. In Figure 2 a table is shown that is made by giving one of the two quantities successive values and solving each expression (equation) for the corresponding value of the other; and then by letting vertical distances represent successive values of y and horizontal distances the corresponding values of x , O being the origin or point of starting to count the successive values of x and y . Where each pair of values of x and y meet, points are formed, and these may be all connected by drawing a line through them, and the ones shown are such lines. They have a certain inclination and position with reference to the two directions of x and y . No matter how much the quantities change in value, those in each expression always retain the same relation to one another. It is noticed that the lines cross at a point. This point is of interesting significance. The x 's are there equal to each other, and likewise the same is true of the y 's, and this cannot occur again anywhere along the course of the two straight lines, no matter if they were indefinitely extended. Figure 3 shows two expressions: $A=x^2$ and $y=2x+8$. The first represents the area of a series of squares. Horizontal distances are indicated by x and vertical distances are indicated by A ; O is the origin or point of starting to count in either direction as before. Suppose we wish to know the area of a square whose side is 3. We count three spaces to the right and then run straight up to the curve where we find the area is 9. If the side is $1\frac{1}{2}$ we find the vertical distance to the curve is $2\frac{1}{4}$, and so on. When the curves are drawn with sharp lines the results can be read very accurately. But it is not this alone that we are specially interested. We are enabled to means of the diagram (graph) how the area varies as we count number of squares of a different length of side. The left

the curve is no special use in regard to areas, but we may use it by way of illustration of another problem at the same time. Suppose we let $y=x^2$ and $y=2x+8$ represent the motion of the two objects, and we wish to know if their paths cross each other anywhere. It can be seen from the diagram that their paths cross at two points; and if they both start at the same time, one from B (or point $y=0$, $x=-4$) and travel with a component or x -value to the right twice as great as the other, starting from zero, they would come together at the point $x=4$, $y=16$ upon the curve; or suppose the second object, instead of moving to the right, was moving to the left (negative direction) with the same rate of horizontal component as the first, they would come together at the point $x=-2$, $y=4$. It will presently be seen that this problem is of the kind that points the way to considerations that are as useful as they are expeditious.

Figure 4 shows the relation of the surface of a cylinder closed at both ends to its height, diameter, and capacity as it would be in the case of a boiler, tank, etc. The volume was considered constant, and the diameter and height varied, and it can be seen that when the surface is least, the lowest point of the surface curve S , that a line drawn straight down from that point crosses the diameter-curve D at the point where the diameter is equal to the height. This, therefore, shows that in order to have the least surface for the volume the diameter must be made equal to the height. This is an important relation where amount of material and weight is a consideration. It is interesting to note, as, for instance, in the case of some canned goods, that the canner has more or less approached it in a crude way. It would be important in the case of marine boilers, but not necessarily any more important in their case than in any other where material or weight is an item. If it were attempted to arrive at this result by experiment, there is a probability that considerable material and time would be consumed, and then without arriving at the true result.

Figure 7 shows the relation between the velocity of water in a pipe and the head. The velocity is represented by distances in the vertical and the head by distances on the horizontal, owing to lack of space to reverse them. Suppose a man wished to draw the water from a pipe at a certain velocity, the question is: At what height should the pipe be tapped? If it were attempted to be done by trial, it may be assumed that an opening has been made and found to have a certain velocity, then closed and another opened. The two have given different velocities, and for illustration let it be assumed that he was extremely fortunate in making the two openings such that they might indicate to him that the proper place was exactly midway between them; but, on the contrary, when the pipe was opened it was found not to be the correct velocity. The result is, he has one more place to mend, and apparently

the relation of the successive values moves along a curve. An allowance for head must be made in estimating the true point, owing to the friction of flow through the kind and size of opening that will be made; and this will be found in tables which are usually matter for "pocket-books."

Figure 5 illustrates briefly, yet comprehensively, an analysis of the accounts of a mine, and indicates what is being done daily, weekly, or monthly, as the case may be. It is taken from an instance of a large "low-grade proposition," although it can be made applicable to a smaller deposit of high grade. Some interesting relations are shown. The curves may include not only pay-roll costs, but other current or mining expenses, barring, of course, unusual expenses, such as may occur from accidents. A third curve showing the expense, other than that due to labor, would show a still more complete analysis. It is seen, however, that the minimum production in this particular mine must not be less than two hundred tons per day, and that the greatest rate of increase of profits is near this point, and when a production of five hundred tons and upward is reached the profits are still increasing, but at a lesser rate. Below the 200-ton point the debits increase at a rate that is increasingly greater than the profits above that point. The critical pay-roll curve is the boundary between profit and loss, and, when that line is not reached by the production there is a loss, no matter what the tonnage may be. These curves afford a quick and ready means of seeing what the production and expense is over any period of operation. The same thing may be extended to include milling and cost of shipment if desirable.

Algebra (a) is easy and ordinarily the first work done is this subject. This part is required in Physics 1 (Mechanics), and 3 (Electricity). Algebra (b) is required for surveying.

3. GEOMETRY. This subject is continued through triangles and proportion within that which is known as plane geometry, or the consideration of those points, lines and figures only which can be represented as drawn on or laid down upon a flat surface. The material object thus represented or figured is considered to stand for, although it is not regarded as being the equivalent of, the concept in the mind. The difference between them is such that it would thwart the purpose of the subject to presume that a demonstration is made by the way a figure is drawn, and construction is not considered by mistake for a proof. Figure 9, page 9, is a problem in mechanics, but the relation between the two triangles ABC and DEF must be known which is entirely a matter of geometry.

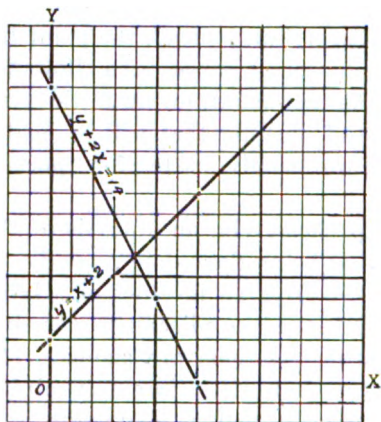


Fig. 1

$y = x + 2$		$y = -x + 14$		$y = x + 2$		$y = -x + 14$	
x	y	x	y	x	y	x	y
0	2	0	14	0	2	0	14
1	3	1	13	1	3	1	13
2	4	2	12	2	4	2	12
3	5	3	11	3	5	3	11
4	6	4	10	4	6	4	10
5	7	5	9	5	7	5	9

Fig. 2

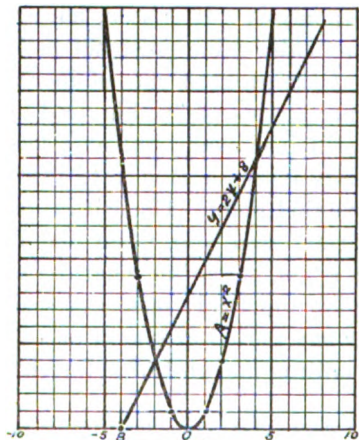


Fig. 3

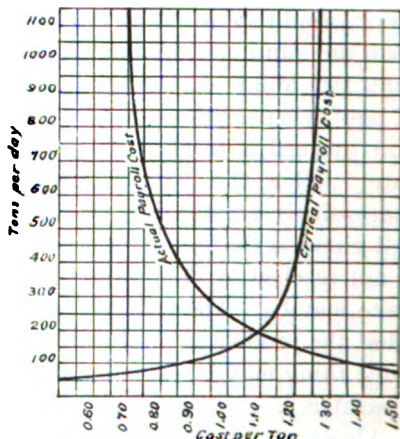
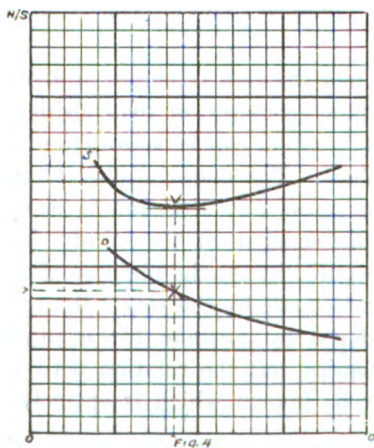
Profit and Loss Curves
Fig. 4

Fig. 5

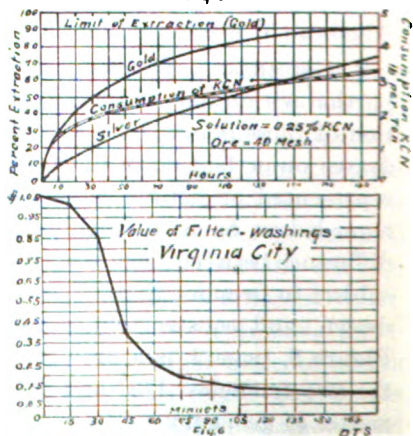


Fig. 6

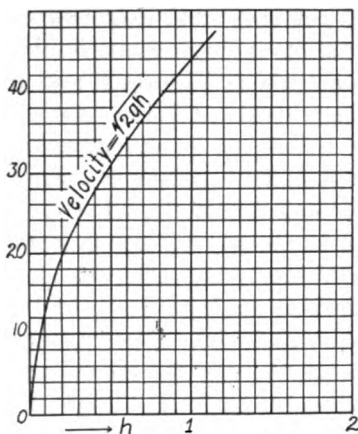


Fig 7

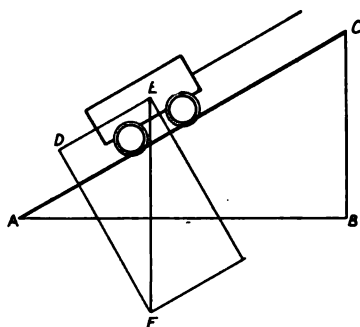


Fig 9

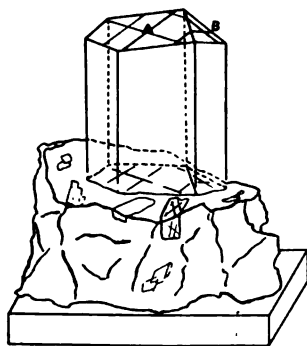


Fig 11

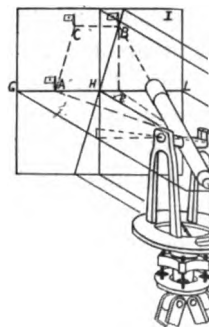


Fig 8

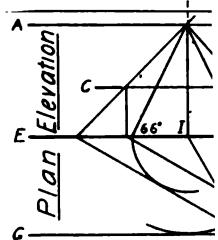
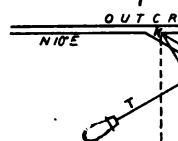


Fig 11

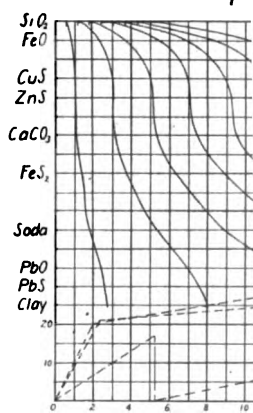


Fig 1

4. **DESCRIPTIVE GEOMETRY.** In this subject about 140 exercises are drawn, or their equivalent. It is essential in surveying, mechanical drawing, and mining. Two illustrations are given, Figures 8 and 10 (page 9). The first shows the effect of an instrument being "out" in one of its adjustments. The effects of the others can be understood by making other drawings and constructions similar in part or as a whole to the one shown in Figure 8. The horizontal axis of the telescope is there shown to be not in its true position by an amount equal to the angle h . This brings the line of sight BK into plane III instead of being in plane II, and supposing the horizontal angle between the two points A and B were desired, if the instrument is out as shown, there will be an error e in making this measurement. On the other hand, should the angle between the two points B and C be desired, there will be no error in making this measurement, for reasons learned in the study of descriptive geometry. The smaller drawing in the lower right-hand corner of this figure is lettered the same as the larger drawing and the planes I and IV are rotated about the line GL until they coincide and the error e is measured exactly. The knowledge acquired from this subject is of great assistance in facilitating the making of plans for underground courses or intersections in a mine, as, for instance, with veins, tunnels, winzes, faults, etc. Figure 10 is an illustration in part self-explanatory. The upper portion of the figure is a map of two veins that intersect; their courses and dips are shown. the line of their intersection KL and tunnel I to meet this intersection at a determined depth. The lower part of this figure is as labeled, plan and elevation, and there is shown the necessary construction on both to arrive at the information desired. The line IJ on the plan gives the course of the intersection KL on the map. CD on the elevation is the level that it is desired to have the tunnel meet the junction of the two veins. AB is of the same elevation as K , the point where they intersect on the surface. Thus are shown some of the uses of this subject. It is not to be supposed that the different illustrations given in this announcement will be understood if the reader has never seen them before. They are given to illustrate that the different subjects in the courses are of use and have a value in the welfare of mining. The understanding of them is not a matter of present concern.

5. **TRIGONOMETRY.** Trigonometry is necessary for the solution of triangles in surveying and is carried through the solution of plane triangles.

II. PHYSICS

1. Mechanics and 1-1

2. Heat and 2-1

3. Electricity and 3-1

Mathematics 1 (Arithmetic), 2a (Algebra), and 3 (Plane Geometry) are required for entrance to Mechanics.

In this course a standard text-book is used, accompanied by a laboratory. The numbers followed by the letter "1" stand for the accompanying laboratory, which is given due importance so that the student may recognize on what ground he knows the principles to be true. He finds out by the use of apparatus with which he receives specific directions that guide him in the building up of the truth stated as a principle, and he finds it out by trial. In this way much of the so-called "book-learning" is replaced by an opportunity of exercising what every man has, namely, observation and judgment.

1. **MECHANICS.** This subject as here pursued is quite elementary, but is sufficient to give a fair idea of forces, their resolution and composition, levers, pulleys, the bending of beams, energy, power, and, in addition, something in the mechanics of fluids. The truth of the principle which was made the subject of an algebraic illustration in Figure 7, already discussed on page 6, comes within the province of this subject, and the consideration of the force necessary to draw a car up an incline, such as in Figure 9 (page 9), belongs here.

2. **HEAT.** Under this head the expansion and contraction of solids and liquids are considered, and the relation of temperature to heat usually considered under the head of specific and latent heat.

3. **ELECTRICITY.** This subject starts with magnetism, which leads to the beginning of the considerations of the current. The magnetic and inductive effects of the current are brought out which are fundamental to the considerations of the ammeter, voltmeter, dynamo, motor, and transformer. In the laboratory there are two small motors that can be "knocked down," and in addition there are various other apparatus illustrating many essentials in regard to electricity. This subject is intended for those who desire to acquire a foundation in the first principles of electricity. Mathematics 1 (Arithmetic) and 2a (Algebra) are required to be had before this subject can be taken.

III. SURVEYING

1. Principles

2. Field Problems

There is required for surveying all the mathematic numbers, and Physics 1 (Mechanics) and 2 (Heat) are recommended.

1. **PRINCIPLES.** These deal with the transit level and the use of the chain or tape and with the methods of solution of problems by them. In making the adjustments their effect upon the work to be performed is of greater importance than the mechanical operation of making them. Figure 8, page 9, is one of the illustrations in point, with regard to the adjustments. For discussion see Mathematics 4 (Descriptive Geometry), page 10.

2. **FIELD PROBLEMS.** Field practice in solution of problems with

transit, level, chain, or tape, note-taking, and mapping. A short course in drawing is given, and it consists in the drawing of "plates," lettering, and mapping. The importance of surveying to the miner is very great. The map of the workings is one of the best records that can be made and kept. Not only is it a record of drifts, shafts, stopes, winzes, adits, etc., but it may be a record of values, amount of ore, the character of the ore, the formations, faults, or any fact of economic importance. Future work can usually be planned, to good advantage, by having at hand the facts shown by good surveys.

IV. MECHANICAL DRAWING

Required for entrance to this course Mathematics 1 (Arithmetic), 3 (Plane Geometry), and 4 (Descriptive Geometry).

Several exercises are done for the purpose of acquiring mechanical skill in the use of instruments. In Mathematics 4 some use will be had of instruments and the skill there displayed is allowed for. Plates of lettering are drawn. Drawings and sections are executed of machinery from measurements made by the student. Mathematics 4 is necessary for sectionizing and projection that in certain cases arise. Drawings are also made of mine timbering and of other framed structures. In the case of the latter Mathematics 2 (Algebra) and Physics 1 (Mechanics) are required in addition to that as first stated, especially when designing is had in view. The forces that are distributed through such structures are represented and analyzed, in this course, graphically.

V. ASSAYING

- | | |
|--------------------------|------------------------------|
| 1. Descriptive Chemistry | 3. Qualitative Chemistry |
| 1-1. Laboratory for I | 4. Estimation of Metals in |
| 2. Mineralogy | Solutions, Ores, and Bullion |

For entrance to this course there is required Mathematics 1 (Arithmetic), and Physics recommended.

1. DESCRIPTIVE CHEMISTRY. This subject is acquired in much the same way as physics, by the use of a text-book of elementary chemistry accompanied by a laboratory, and for the same reasons the laboratory is very important. Solutions, acids, bases, and salts are treated from the electrolytical point of view. This subject is concluded with the metallic and nonmetallic groups. This subject is about the most important in the course.

2. MINERALOGY. A brief course is given in crystal form, together with some principles regarding the physical properties of minerals. Particular attention is given to their occurrence, with special emphasis on the chemical composition for reasons of assaying. The student is made familiar with minerals by working with them, assisted by "tables" for their determination.

There are about two hundred mineral specimens in the school collection. Figure 11, page 9, is an illustration that is not found in the text-books, which the beginner usually finds rather highly specialized technically. It is shown merely to indicate a short and common-sense way of looking at crystal form, and is satisfactory for most practical purposes. One mineral, in particular, is seen exposed on the surface of the specimen and the outline of the part broken away is shown. The mineral broke along cleavages parallel to the end faces *A* and *B* and on these faces are seen certain straight lines that cross one another, forming angles of intersection. These lines are formed by those cleavages that go through the mineral lengthwise, and their angle of intersection on *A* is different from that on *B*. By consideration this difference is seen to be due to the surfaces *A* and *B* being at an inclination to each other. The planes in question are really at the same angle to one another throughout all parts of the crystal. When, at length, after handling a great many minerals, it is found that the same mineral has the same character of cleavage surface, the same angle of cleavage, the same hardness, the same color of dust when powdered, etc., wherever found, it becomes appreciated that these physical features are valuable for the recognition and determination of minerals at all times. The first work done under this head is in the finding that each mineral bears a collection of certain physical features, expressed as a unit in a type of crystal form.

The assayer should be reasonably skilful in the determination of minerals. The mineral composition of ores is important from all standpoints. Whether it be the estimation of gold and silver by the fire assay or other metals by liquid reagents, the mineral composition should govern the procedure. There are some lengthy standard methods for certain cases, but the assayer should not be a machine in this age of competition for speed and accuracy.

3. QUALITATIVE CHEMISTRY. This is a laboratory course in making separations of metals in solution from one another, and comprehends the general principles of analysis. Blowpipe testing is included.

4. ESTIMATION OF METALS IN SOLUTIONS, ORES, AND BULLION. The first estimations made are those of the metals copper, lead, zinc, and iron. This is done volumetrically by means of "standard" solutions. Some determinations are made as precipitates, which are weighed, and the metals calculated. Gold and silver are estimated by fire methods. The assay of cyanide solutions may require all of the methods. The first thing done in fire assaying is the determination under what conditions there is the least loss of silver in cupellation. Next, the reducing power of certain substances, and then fluxing tests are made on both extremely basic and acid ores. This is followed by the assaying of ores of a variety of composition. See page 12, Assay subject

No. 2, Mineralogy. The assay course is chemical, utilizing all the preceding numbers. Particular attention is paid to the principles underlying good fluxing, and it has been reduced to the form of a diagram, of which Figure 12 is a portion. By proper fluxing there is an economy of flux, fuel, and time. If the quantity of flux is not rightly proportioned or properly compounded to balance against the ore, there will be either part of the ore or some of the flux that will not take part in the chemical dissolution. Heat is absorbed from the action and extra fuel consumed and material wasted. There is danger of not decomposing the ore sufficiently to free all of the metal at the proper time. In the long run, the items time, fuel, and flux amount to not a little, to say nothing of the possibilities of inaccuracy and its consequences. A few assays of bullion are made, a few scorifications, and a few roasts.

VI. CYANIDING

Necessary for this course is Mathematics 1 (Arithmetic) and all the assay numbers. Mathematics 2 (Algebra) is recommended. Tests are made upon an ore to discover the course of treatment that is called for by its nature. Small tests are made upon a few pounds and afterwards on a larger quantity of about two hundred and fifty pounds to check out the treatment. The percentage of extraction is determined for each small test and a curve constructed like that in Figure 6. Such a curve assists in determining when the time of profitable treatment is reached. The lower portion of the figure indicates the sort of a diagram that helps to determine the rate at which the charge washes after taking off the solution.

VII. PROSPECTING

- | | |
|----------------------------|-------------------------------|
| 1. Geology of Ore Deposits | 3. Field Observations |
| 2. Rocks | 4. Field Testing for Minerals |
| 5. Rudiments of Mining Law | |

This course requires Mathematics 1 (Arithmetic), Assay subject 2 (Mineralogy), and a specially devised chemical course that is not as long as Assay subjects 1 and 3. The full assay course is recommended.

1. GEOLOGY. This subject consists in reading standard texts with special reference to ore deposits.

2. ROCKS. The study of rocks comprises some reading and the use of a knowledge of minerals indicated by Assay subject 2 (Mineralogy). There are about fifty characteristic rock specimens in the school, and these, together with those of the district, enable the student to acquire a familiarity that is fairly good.

3. FIELD OBSERVATIONS. These are made in and about the district as time can be had to devote to it.

4. FIELD TESTING FOR MINERALS. These tests are made both mechani-

cally and chemically, and those given for gold and silver are as reliable as the convenience of them in the field will permit, and as a whole they are better than fair.

5. **RUDIMENTS OF MINING LAW.** This subject is treated in brief outline, yet sufficiently to understand making locations. Some attention is given as how best to locate, and some discussion of conflicts.

GENERAL INFORMATION

The subjects which form the parts of a course are numbered progressively, the numbering therefor indicating the order in which they are to be taken. There is a possibility of making certain groupings. Numbers cannot be taken up which are dependent on others being completed from their start, but, if their beginning depends only on the first part of another number, they may be taken up when that part is completed. In that event, however, the number on which they depend must be kept ahead or completed before they can be finished. Greater speed may be made by such arrangements. Such arrangements must be approved before they can be entered upon, and a communication in regard to any plan will receive careful attention.

A word to those who want to take "just a little fire assaying, so they could do one for themselves if they wanted to." If the description of the courses has been followed, it does not seem possible to see where such a thing would fit in, besides there are plenty of assay offices as against one school where manipulation can be acquired by being a helper for a time, for undoubtedly some one about the offices would be willing to show him the things he wants. The object of the school is to give what cannot be had in the mine, mill, shop, or office, and avoid duplicating them, otherwise there would be no economy in its existence. What is acquired in them is well and good. The school has its functions to perform and an authority, which is its own, over its work, as much as they have over theirs, and there is room for both. To all intents and purposes the school is calculated to lead, without frills, in a plain matter-of-fact way, a man to the possession of more resource in his undertakings or in any of the vocations in mining in which he may happen to be. The so-called highly theoretical elements that are commonly contained in such courses are eliminated. This is done with no pretense of saying that theory is always useless, nor should there be suspicion that if it were retained that it would be put into a new garb or given a new name in order that it be disguised. Nor has there been an endeavor to make it appear that because of the elimination of the higher theoretical elements there was added something "theoretical" or "practical," implied in those terms as used but not understood, that leads mysteriously to success. Necessity requires that there be nothing added. It is only needed that there be selection and adjustment. The courses deal only with plain common-sense principles and the skill necessary to use them. Nothing could be much simpler.

The instruction is largely personal and individual, since class formation is not entirely practicable, for those at least who have a "shift," owing to the irregularities occasioned by the "change" from one shift to another that occurs regularly in the mines, mills, or elsewhere. **Classes are formed in the most convenient way for others.** It is expected that there be given a minimum attendance of two hours per day, which gives an allowance of considerable time aside from that required for a shift and a rest. The doors are open about ten hours, and a person is at liberty to put in as much time over the minimum as he is inclined.

There are no dormitories and the town must afford rooms and board. The cost of living varies from \$35 to \$40 per month, and it is possible for those not employed to board for less than a dollar a day. Rooms are from \$6 to \$8 per month.

A diploma is given and "the number of credits assigned to each subject is based upon similar work done by the students of the University of Nevada."

The students have a local organization with constitution and by-laws, and elect their own officers. The funds supplied by the State have not so far been sufficient to meet the demands that are made upon the school, so the association at present charges an admission fee of \$5 and monthly dues of \$2.50, payable in advance. A deposit of \$10 is required for fuel and apparatus for the assay course if it is taken. The apparatus is supplied at cost, and for all that is returned in good condition the deposit is rebated. Each student must supply his own books, and the few that are used are not expensive, and he must make an allowance of from two to four days from the time they are ordered until they are received. Application for admission is made by filling out a blank form, in which there is a declaration of good and reasonable intentions, addressed to the Scholarship Committee, which is composed of the President and Secretary of the Association, and the Instructor. The application should be accompanied or preceded by the plan of work that is proposed to be taken. If the applicant is of public-school age, the application must be accompanied by a permit from the public-school authorities. Along with those already mentioned, the school is also open to any one who cannot avail himself of the privileges of a special student in the University.

Virginia City, Nevada, is located on the famous Comstock Lode, where there has been mining since 1859. The climate is that of the mountains, being at an elevation of 6,300 feet, and the thermometer is seldom below zero. Snowfalls are variable, being occasionally large, but are usually not much over a foot. The summer heat is not excessive, as may be inferred.

There is a vacation for the summer months and an intermission for

the Christmas holidays. Entrance to the school may be made at any time during the session, and the nearer it is done to the beginning of the term the greater is there a gain in time upon a course. Special notice is given of the date of opening each term.

Any further information may be had by communication.

DWIGHT T. SMITH,

Instructor.

Box 531, Virginia City, Nevada.

Secretary of Virginia City
Mining School Association,
Box 298,
Virginia City, Nevada.

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CHEMICAL LABORATORY



ASSAY LABORATORY



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT
1914

STATE OF NEVADA

INITIAL REPORT

OF THE

NEVADA TAX COMMISSION

1913-1914



CARSON CITY, NEVADA

STATE PRINTING OFFICE : : : JOE FARNSWORTH, SUPERINTENDENT

1914



The Nevada Tax Commission was created by the Twenty-Sixth Session of the Legislature, and the Governor, immediately after approving the measure, appointed Charles H. Colburn, of Reno, and Emmet D. Boyle, of Virginia City, to the two Commissionerships. J. F. Shaughnessy, First Associate Commissioner of the Railroad Commission, was, by the terms of the Tax Commission Act itself, designated as the Chairman.

The newly created board held its first meeting in Carson City on April 3, 1913, and L. F. Adamson was elected Secretary. Emmet D. Boyle resigned August 10, 1914, and was succeeded by F. N. Fletcher, of Reno.

Nevada, like the majority of the States, depends in a large measure for its revenue on the general property tax. That thirty-eight (38) of the forty-eight (48) States of the Union have found it necessary to provide some form of centralized authority to supervise the work of local Assessors, is the best proof that the system, without such supervision, has been unsatisfactory.

All of the Western States now maintain Tax Commissions or State Boards of Equalization exercising powers similar to those delegated to the Nevada Tax Commission, and the fact that some such head was needed in this State has long been apparent.

A State Board of Equalization, consisting of certain of the state officers acting in an ex officio capacity, was tried out here in the early '90s, but its action did not meet with popular approval. Later an effort was made to effect equalization by methods which would usurp in the slightest degree possible the powers theretofore enjoyed by the separate county governments. The State Board of Assessors was created by the Twentieth Session of the Legislature in 1901. It was composed of the several County Assessors and met annually in Carson City with the State Board of Revenue to fix valuations on certain prescribed classes of property, the remainder being left to the various County Assessors. Assisted by the Railroad Commission, it made substantial increases in the assessed valuation of the railroads, and, theoretically, in the assessed valuation of live stock.

That some of the individual Assessors failed to keep faith with the board is clearly enough shown in the fact that, after years of attempted equalization by this method, no two counties were found to be assessing property on the same percentage of actual value. Two counties in 1912 had the bulk of their property assessed for more than 100% of its value, and one county at an average of not over 20%.

The state assessment being made on the aggregate assessment of all the counties, the State receives that proportion of the total revenue collected that the state rate bears to the combined state and county rate. An assessment on a low percentage of actual value in any particular county therefore results in the evasion by such county of a part of the state expense which it is legally called upon to pay, and the throwing of this additional burden on those counties which are assessed at or above the general average of actual value. The county assessed on a 20%

basis paid less than half, while the counties assessed at full cash value paid more than twice what they should have paid, respectively, toward the upkeep of the State Government.

Under our Constitution the Legislature sets the tax rate for the ensuing two years at each session. This rate is based on the known expenditures authorized by the Legislature and on the estimated aggregate assessment roll of all the counties. While the assessed valuation of each county was purely a matter of county policy—their own rates being entirely within their control—the State was at the mercy of the Boards of County Commissioners and Assessors. If the aggregate roll for the whole State fell short of the estimates of the Legislature, the State was unable to meet its obligations, and, with the counties vying with one another in the matter of keeping valuations down, the natural result was a shortage in revenues over a period of years, which finally exhausted the constitutional borrowing power of the State in 1912.

The lack of equalization between the counties was no greater than the lack of equalization in individual assessments.

The taxpayers of the State were indulging in a high carnival of "individual equalization," a large proportion of the livestock interests returning 40% of their property for assessment at half its value, many of the mines defeating the bullion tax by the maintenance of separate transportation and milling companies which absorbed the profits; much of the land throughout the State being grossly undervalued for assessment, and homes in the towns and small property owners being, as a general thing, assessed very much above the average.

The first act of the Tax Commission, after its organization, was to visit the various County Assessors and to obtain from each a statement of the manner in which property in his county was assessed.

Practically every Assessor admitted that nothing approaching equalization had been obtained in his county, and with few exceptions reported the assessment on small homes higher than the average assessment of the property. A low average valuation seemed to be the rule in the majority of the counties, a system which Nevada can thank for tax rates which are sufficiently high to discourage investment on the part of any stranger who is not fully acquainted with the facts in the case.

The immediate causes leading up to the demand for a correction of these abuses were:

- (1) The unsatisfactory condition of state finances, and
- (2) The growing dissatisfaction with the inequality of assessments.

In 1911 Governor Oddie proposed a Tax Commission bill to the Twenty-Fifth Session of the Legislature, which failed of passage. This bill was also submitted by Governor Oddie to the extraordinary session of the Legislature which convened in 1912, at which time it again failed of passage. In February, 1912, the General Fund of the State Treasury was exhausted, and it became necessary to call a special session of the Legislature to increase the bonded indebtedness of the State to the full constitutional limit, or \$300,000.

In 1913 the Governor submitted to the Legislature a statement worked up from the Controller's books showing the receipts and disbursements of the State, strictly in the operating account, which was as follows:

	<i>Receipts</i>	<i>Disbursements</i>	<i>Deficit</i>
1909	\$832,931.15	\$1,069,490.75	\$226,559.60
1910	848,242.82	888,132.26	39,889.44
1911	850,799.94	1,003,995.49	153,195.55
1912	927,960.40	990,085.56	62,125.16
Totals	\$3,459,934.31	\$3,941,704.06	\$481,769.75

The receipts and disbursements mentioned include all receipts and disbursements into and from the State Treasury, with the exception of such receipts as accrue from the sale of school lands, penal fines, escheated estates, etc., which are required to be invested for educational purposes in government, state, or county bonds, and such disbursements as are required for redemptions. The interest only becomes a receipt, in the proper sense, and is applicable for educational purposes and none other.

This statement indicates that from the beginning of 1909 to the end of 1912 the State's revenues were insufficient by an average amount exceeding \$120,000 per year to meet its expenses.

In explanation of this average deficit, the following extract is taken from Governor Oddie's message to the Twenty-Sixth Session of the Legislature of 1913:

The foregoing deficiency, showing in each year since 1909, falls very largely on the General Fund and for all intents and purposes may be so considered. A comparison of the net cash balances in the General Fund, after deducting outstanding warrants, at the beginning of each year shows as follows:

January 1, 1909	\$451,082.20
January 1, 1910	241,398.18
January 1, 1911	175,020.50
January 1, 1912	44,514.16
January 1, 1913	54,422.25

There was \$276,061.70 less in the General Fund on January 1, 1911, than on January 1, 1909, showing that the deficit between the income and expenditures for 1909-1910, aggregating \$266,449.04, had been largely met by a draining of this fund.

Now the cash balance on January 1, 1909, showed a surplus over the amount necessary to cover the expense of the legislative session and to meet the normal disbursements from it until June 30, following (which may be estimated at \$350,000), approximating \$100,000. On the other hand, on January 1, 1911, the same basis of accounting (\$350,000 required) shows an actual deficit in the General Fund of \$175,000; there being, to that extent, insufficient moneys to meet the expense of the Legislature and conduct the government until June 30, 1911. These differences disclose why the deficits of 1909-1910 did not create a crisis in our fiscal affairs during those years.

For some years public interest in matters pertaining to state finances had been growing, and in the autumn of 1912 a number of prominent citizens and public officials, including Governor Oddie, Lieutenant-Governor Ross, Senators Newlands and Massey, Railroad Commissioners Shaughnessy and Simmons, Alex. J. McCone, Charles B. Henderson, Frank Williams, and others, at various times discussed informally some of the more important features of the financial situation in the State. As an outcome of these discussions, a letter was written by Senator Newlands to Mr. F. J. Shair, president of the Reno Commercial Club, setting forth some salient facts relative to income and expenditure and suggesting that the Commercial Club take the initiative in organizing a movement designed to crystallize public sentiment in favor of such wise legislation as might be needed.

At a meeting of the Commercial Club held November 14, 1912, a resolution was passed requesting Governor Oddie, Lieutenant-Governor Ross, and Senators Newlands and Massey to act as an appointing board and appoint a committee of citizens to investigate and report on matters



pertaining to economy and taxation. In response to this request a committee of twelve members, consisting of Clay Tallman, of Tonopah; John Henderson, of Elko; A. R. Merritt, of Fallon; D. S. Dickerson, of Carson City; A. J. McCone, of Reno; John G. Taylor, of Lovelock; Romanzo Adams, of Reno; George Gillson, of Carson City; Hugh H. Brown, of Tonopah; Levi Syphus, of Saint Thomas; R. M. Price, of Reno, and August Frohlich, of Reno, was appointed, and a meeting was called to be held in the rooms of the Reno Commercial Club December 3 and 4, 1912.

The following is an extract from the report of the Citizens' Economy and Taxation Committee detailing their first and second meetings held in December, 1912:

The First Meeting—December 3 and 4, 1912

At this meeting all members were present and three sessions, lasting a day and a half, were held. Most of the time was given to informal discussion. The consensus of opinion appeared to be that practical effort should be in two directions—one looking to a reduction of state expenditures where this could be done without impairing the service, and the other toward some modification of our system of assessment and taxation designed to secure greater uniformity.

In order to secure more complete information relative to these matters, provision was made for the appointment of four subcommittees as follows:

First—A committee of five to investigate and report upon the present laws as to taxation, with special reference to their practical working, particularly in regard to the uniformity or lack of uniformity of assessments, and in regard to assessments as compared with actual cash values, and with regard to licenses and the bullion tax.

Second—A committee of three to make a comparative study of the tax systems of other States, especially of States in which conditions are similar to those of Nevada, and to consider the question of adapting some features of these systems to the use of this State; also to consider the inheritance tax.

Third—A committee of three to investigate and report on the condition of the state revenues, and the state expenditures in recent years so far as may be necessary.

Fourth—A committee of three to report on the possibility and feasibility of a more economical administration of state affairs.

Further provision was made for an Executive Committee, consisting of the President, the Secretary and the Chairman of each subcommittee.

A Finance Committee of sixteen members, one from each county, was appointed and its members were requested to aid the work by securing funds to pay the necessary expenses of printing, postage, clerical assistance, and special investigation.

January 11 was fixed as the date of the next meeting, and the Assessors of the State were invited to be present at that time.

The Second Meeting

On January 11 and 12, 1913, the committee as a whole reassembled, the following-named members being present: Clay Tallman, D. S. Dickerson, Romanzo Adams, John Henderson, A. J. McCone, R. M. Price, A. R. Merritt, George Gillson, and August Frohlich.

A telegram was received from Hugh H. Brown expressing his regrets that he was not able to be present and a letter of similar import was received from Levi Syphus. Mr. Brown, as chairman of a subcommittee, had sent his report to Chairman R. M. Price.

The Assessors of Elko County, Humboldt County, Lander County, Washoe County, Nye County, Lincoln County, and Clark County were present, and they participated in the discussions.

The time of this meeting was devoted mainly to a presentation and discussion of the reports of the various subcommittees.

In the absence of Mr. Syphus and Mr. Taylor, the report of the first committee was presented as the report agreed upon by the three members present.

As the members of the second committee had not been able to get together, each presented a report.

The third committee referred to the Controller's reports relative to the recent tendencies as to income and expenditure.

The fourth committee presented a partial report pending the completion of the work of the special State Auditor.

In the discussion following the reading of these reports there appeared to be a very general agreement along the main lines of the various reports, and formal resolutions were passed recommending—

(1) That public expenditures be reduced where this can be done without sacrificing the efficiency of the service;

(2) That a tax commission be created with broad powers along the lines recommended in the reports; and

(3) That an inheritance tax be enacted along the lines recommended by the National Tax Association.

In addition to the reports of the regular subcommittees, two other papers received attention and were ordered printed: (1) A communication from Honorable L. F. Adamson, State License and Bullion Tax Agent, and (2) the report of Honorable J. F. Shaughnessy, State Railroad Commissioner, to Governor Oddie, relative to the Des Moines meeting of the National Tax Association to which he had been appointed as a delegate. Credit should be given to Mr. Adamson for other information of a confidential character relative to the extent of bullion tax evasions.

Largely as a result of this report, the present Tax Commission bill became a law at the succeeding session of the Legislature, though its passage was opposed so vigorously by various interests that the fate of the bill hung in the balance until the closing days of the session.

An Inheritance Tax law was also passed as a result of this committee's efforts, reference to which is made later in this report.

The Ways and Means Committees of both houses had in contemplation the fixing of the state rate at 76 or 80 cents should the measure fail, but on its passage allowed the tax rates as originally set for 1913 and 1914 to stand at 66 cents for the former and 60 cents for the latter year—acting on the presumption that the Tax Commission would take care of the State's obligations by substantial increases in the assessed valuation of property in the process of equalization.

STATE REVENUE AND EXPENSES

Figures which show accurately the cost of the State Government are not available in the published reports of the state departments having to do with fiscal matters. The annual reports of the State Controller and State Treasurer, while showing in great detail all of the financial transactions of the State, are not designed to show the annual operating cost of the government even approximately, and this being a matter of vital importance to the Tax Commission, it became necessary for the latter to compile its own statistics—a record showing the receipts and disbursements for 1913. This record appears in Tables 1 and 2 following in this report.

Subsequent to the compilation of this data by the Commission, the Special Auditor, Mr. Paul Gaston, a certified public accountant, made a report to the State Board of Examiners, which substantially agrees with the tables before mentioned. This report comments unfavorably on the clerical methods employed in the Controller's department, and shows that the present accounting system is obsolete.

The Tax Commission, empowered to supervise the revenue system of the State, would be derelict in its duty should it fail to call attention to the unsuitability of the present system of keeping accounts now employed by the State.

The inability of the Legislative Department for the past several years

to figure out what should have been the simple problem of levying a tax rate adequate to bring in the moneys appropriated from the various funds, is unquestionably due to the fact that the official records left every one concerned very much in the dark as to the true condition of the State's finances. It is inconceivable that the Legislature would, year after year, proceed to overdraw the State's account wilfully, yet the fact remains that the account has been so overdrawn. An accounting record of receipts and disbursements would have successfully prevented this, and it is certainly high time that steps be taken to provide such a record for the future.

At this point we wish to particularly call attention to the report of the State Controller for the year 1913, pages 42-43, wherein the expense of the State Government for the year 1913 is given as \$2,026,658.08. The actual operating expense for the year 1913, as shown herein is \$938,749.49, being the expenditures shown as \$984,749.49, less amount of District Judges' Salary Fund, \$46,000, which, while included in both statements of operating receipts and expenses in this report, is actually a district and not a state item. This item of \$46,000 is received and disbursed through the State Treasury purely as a matter of accommodation to the several districts.

The question naturally arises: Why this tremendous difference of \$1,087,908.59 between the report of the State Controller and the report of the Tax Commission? On page 20 of State Controller's report for the year 1913, under "Recapitulation of Disbursements" analysis, will be found the following items:

Purchase of Nevada State bonds.....	\$300,000.00
Redemption of Nevada State bonds.....	234,000.00
Purchase of California State Highway bonds.....	156,474.26
Purchase of Churchill County School bonds.....	6,587.70
Purchase of New Mexico State Refunding bonds.....	129,825.00
Purchase of Nye County Refunding bonds.....	19,516.10
Purchase of Clark County Courthouse bonds.....	77,162.50
Apply to General Fund from State Loan.....	116,451.73
Interest on Nevada State bonds.....	30,746.73
District Judges' Salary Fund.....	46,000.00
Total.....	\$1,116,744.02

The sum total of these items is included in the State Controller's report of \$2,026,658.08 as the expense of operating the State Government for the year 1913. While it is perfectly obvious to any one at all familiar with accounting that this inclusion is erroneous, a little explanation for the layman may not be amiss. An expense is not incurred until an obligation is created, and when an obligation is created and entry thereof made it is a matter of record in the account benefited. The purchase of a bond creates no obligation on the part of the purchaser, but simply changes the form of an asset; the redemption of a Nevada State bond creates no obligation, but simply transfers money from one fund to another and is purely an internal transaction; while the application to the General Fund from State Loan does not create an obligation, but simply places the money accruing from this source in a position to be used for expenses, and when it is so expended it then, and not until then, becomes a legitimate entry against the State's operating expense.

Interest on Nevada State bonds is not a state expense, simply resulting from borrowed money from one fund for the benefit of another, and is entirely an internal transaction. Judicial Salary Fund is not an expense, and full explanation thereof immediately precedes last tabulation above.

From this explanation it will be clearly seen that this amount of \$1,117,644.02 should be deducted from the State Controller's report of expenses of the State Government for the year 1913, which would reduce that figure to \$909,914.06, as against the figures of the Tax Commission, *i. e.*, \$938,749.49—a difference of \$28,835.43. However, in figures compiled by the Tax Commission showing State's expenses for year 1913, is included item of State's proportion of salaries of county officers, \$30,322.61, which does not appear in State Controller's report. The addition of this sum to the State Controller's figures leaves a difference of only \$1,487.18 between his figures and the figures of this Commission. A complete and minute analysis of the State Controller's report of disbursements would be necessary to account for this minor difference.

Special Accountant Paul Gaston, in his report to the State Board of Revenue, shows the actual operating expense of the State Government for the year 1913, in round figures, as \$922,000. The difference between his report and the report of this Commission, amounting to approximately \$16,000, is due to the fact that Mr. Gaston had full access to the records of the State Controller's office and rendered a report for the exact fiscal year which coincides with the calendar year, thus excluding all accounts dovetailing from the year 1912 into 1913 and from 1913 into 1914. The Tax Commission's figures are based on the published reports of the State Controller and the State Treasurer, the items being properly classified by this Commission. The reports of the State Treasurer and State Controller took no account of dovetailing items, thus bringing certain 1912 entries within the purview of this report and omitting certain 1913 items.

The foregoing criticism of the obsolete clerical methods employed in keeping the State's books is not published here in any spirit of derogation. The system has been in use for many years and has simply outlived its usefulness. There can be but little doubt that the present State Controller and his Deputy have done much to improve the system during their terms of office, but the work is by no means complete. Any private enterprise doing a business of equal magnitude would inevitably go bankrupt if it kept its books as the State's accounts are kept.

Table No. 1, heretofore referred to, gives an analysis of the revenues of the State for 1913. Summarized, this table shows the State to have numerous sources of revenue, these being:

Taxation	\$871,015.20
Profits on bond transaction	52,462.31
Licenses	62,502.93
Escheats	250.58
State offices	45,366.61
State institutions	6,082.55
Interest	70,308.36
Sale of lands	68,112.47
Lease of lands	5.00
District Judges' salaries	46,000.05
Court fines	8,540.45
Total	\$1,087,646.51

We would most urgently recommend that the Legislature pass an Act submitting the entire accounting system of the state and county governments to an approved firm of certified public accountants, and that they be required to install a suitable uniform system that would properly dovetail throughout; that all county and state officers be required to accept and fully maintain such system.

The installation of such a system, in comparison with that at present in use, would pay for its cost many times over each year and provide means for the annual issuance of a detailed statement of receipts and disbursements for the benefit of all taxpayers.

Receipts from the sale of state lands, escheats, penal fines, and revenue from other designated sources are not available for disbursement in payment of ordinary expenses. In fact, such receipts cannot be disbursed at all, but go to the credit of trust funds, the interest alone from the investment of which is available for use, and this use being confined strictly to the support of education.

The receipts as shown above are apportioned as follows:

To trust funds (not disburseable).....		\$88,987.78
To support of education only.....	\$153,177.13	
For all other purposes (schools included).....	795,481.60	
		<u>948,658.73</u>
		\$1,087,646.51

There was, therefore, available for disbursement in paying the State's operating expenses, inclusive of Judicial Salary Fund, the sum of \$948,658.73 from the revenues of 1913.

The disbursements over the same period are shown in Table No. 2, under column headed "Expended 1913."

The following summary shows the amount of total expenditures and the percentage of the total cost of each of the principal subdivisions of the State Government:

	Amount	Per cent of whole
Executive Department—		
Elective offices.....	\$100,622.74	10
Appointive offices and commissions.....	116,093.71	11
Charitable and penal institutions.....	158,039.98	16
Educational institutions.....	350,469.66	37
Judicial Department (including Judicial Salary Fund).....	78,771.84	8
Legislative Department.....	70,167.72	7
Miscellaneous.....	110,583.84	11
	<u>\$984,749.49</u>	<u>100</u>

From the foregoing it appears that the disburseable receipts in 1913 fell short \$36,090.76 of the actual disbursements made from the various funds in the State Treasury during the same period. These figures, it should be remembered, take into account only the last half of the 1912 taxes and the first half of the 1913 taxes, the last half of the latter coming delinquent in June, 1914.

The Twenty-Sixth Session of the Legislature fixed the state tax rate for 1913 at 66 cents on each \$100 of assessed valuation and for 1914 at 60 cents, apportioned as follows:

	1913	1914
General Fund.....	40.1	34.1
State Loan Interest and Redemption Fund.....	1.5	1.5
General School Fund.....	6.0	6.0
Territorial Bond Interest Fund.....	2.4	2.4
Exposition Fund.....	6.0	6.0
Contingent University Fund.....	8.0	8.0
Nevada School of Industry Fund.....	2.0	2.0
Totals.....	<u>66.0</u>	<u>60.0</u>

The same Legislature made appropriations aggregating, together with the appropriations authorized by former Legislatures, expendable in 1913, the sum of \$1,493,987.35.

The estimated requirements for 1914 appear to be \$1,170,169. The

details of this estimate appear in Table No. 2 herein, a budget prepared by this Commission. The estimate of expenditures to be made in 1914 may be subject to correction one way or the other.

Had the requirements of the various funds for the year 1914, to be raised by general taxation, been known to the Legislature, and these requirements had corresponded with the figures shown in Table No. 3 herein, they would have been as follows:

General Fund	\$507,196.00
Exposition Fund	92,000.00
State Loan Interest and Redemption Fund	15,000.00
State School Fund	71,175.00
Territorial Bond Interest Fund	19,000.00
Contingent University Fund	83,570.00
Nevada School of Industry Fund	25,000.00
Total	\$812,941.00

This would have meant the proper segregation of the 1914 tax levy as follows:

General Fund	87.48
Exposition Fund	6.79
State Loan Interest and Redemption Fund	1.11
State School Fund	5.25
Territorial Bond Interest Fund	1.40
Contingent University Fund	6.17
Nevada School of Industry Fund	1.85
Total	60.00

The estimated income of the State from all sources, other than taxation, in 1914 is \$430,478, apportioned as follows:

To amount of disburseable trust funds	\$78,250
To disburseable educational funds	172,173
From all other sources excepting taxation	185,065

From this amount \$357,228 will be available for current operating expenses, leaving a balance of \$812,941 to be raised by taxation to meet the former estimated requirement of \$1,170,169.

Without going into the entire details by which the results are obtained, it may be said here that if each fund provided for in the tax levy Act had to be supported by the levy made expressly for that fund, it would be necessary to increase the assessed valuation of all property in the State to approximately \$186,000,000 for the year 1914 to take care of the full appropriation drafts on the General Fund.

The Supreme Court of the State, in the case of *The State, ex rel. George T. Mills, et al., v. Wm. McMillan, State Treasurer*, 34 Nev. 264, has, however, taken a very liberal view of the disposition to be made of state moneys not expressly dedicated to educational purposes, and this Commission, in figuring the estimated assessed valuation required this year to keep the state revenues up to its expenditures, has treated all of the funds provided for in the tax levy Act as one fund. Proceeding on this theory, an aggregate assessment roll of \$135,000,000 will produce sufficient revenue to take care of the estimated requirements of the State for the year 1914.

It is the intention of this Commission to make an urgent recommendation to the Legislature to revert to the General Fund all unexpended portions of special appropriations at the expiration of 1914, with the idea that new appropriations may be made where deemed necessary and the State's accounts cleared of all unnecessary or useless burdens. It would be impracticable to make this recommendation at the present

time, as there are yet several months of the current year during which expenditures of unknown amounts will doubtless be made from these various funds.

While it is hoped this recommendation will be so acted upon by the Legislature as to materially reduce the revenue required to meet the year's expenses, the Tax Commission, realizing that it is only acting in the capacity of agent for the Legislature, does not feel warranted in assuming that the full amount of reversions recommended will be possible, or, being possible, will be favorably acted upon by the Legislature in their entirety. The Commission will therefore endeavor to bring in an assessed valuation for the State for the year 1914 of approximately \$150,000,000. This, we feel, should be ample to meet all actual requirements.

TABLE NO. 1

Estimated Income of the State of Nevada, 1914, Aside from General Property Tax

Sources of income	To nondis- bursable trust funds	To dis- bursable educa- tional funds	To general and allied funds	
			From taxation	From other sources
Assessment Roll—				
General Fund.....	34.1			
State Loan Interest and Redemption Fund.....	1.5			
General School Fund.....	6.0			
Exposition Fund.....	6.0			
Territorial Bond Interest Fund.....	2.4			
Contingent University Fund.....	8.0			
Nevada School of Industry Fund.....	2.0			
Sheep tax.....			\$12,000.00	
Licenses—				
Liquor, dance hall, prize-fights, etc.....				\$87,750.00
Insurance.....				11,750.00
Attorneys.....				875.00
Automobile.....	\$6,000.00			
Banking.....				3,500.00
Optical.....				10.00
Escheats.....	250.00			
Inheritance tax.....				2,000.00
State Officers and Institutions—				
Supreme Court fees.....				1,200.00
Secretary of State fees.....		\$8,500.00		20,500.00
State Engineer fees.....				2,600.00
Hospital Mental Diseases.....				540.00
Orphans' Home.....				2,400.00
Income from Trust Fund Investments—				
Nevada 5% bond.....	\$390,000	19,000.00		
Nevada 5% bonds.....	245,000	12,250.00		
Massachusetts 3 and 3½% bonds.....	1,008,000	31,455.00		
Idaho 4% bonds.....	185,000	7,400.00		
New Mexico 5% bonds.....	125,000	6,250.00		
California 4% bonds.....	157,000	6,280.00		
Nye County 6% bonds.....	19,000	1,140.00		
Churchill County 5% bonds.....	6,500	325.00		
Clark County 6% bonds.....	75,000	4,500.00		
Nevada 5% bonds.....	89,000	1,950.00		
Massachusetts 3 and 3½% bonds.....	68,500	2,279.00		
Nevada 5% bonds.....	16,000	800.00		
Massachusetts 3 and 3½% bonds.....	33,500	1,044.00		
District Judges' Salary Fund.....				46,000.00
Income from sale of state lands.....	68,000.00			
Income from interest on land contracts.....		69,000.00		
Miscellaneous—				
Docket tax.....				130.00
Sale of Statutes.....				2,100.00
Interest on bank loans.....				1,200.00
Sundry sources.....				2,000.00
Sale of Nevada Reports.....				500.00
Totals.....	\$73,250.00	\$172,178.00	\$12,000.00	\$185,055.00

GRAND TOTAL.....\$442,478.00

It will be noted in the budget of estimated requirements for 1914 (Table No. 2 herein) an allowance of \$92,000 is made from the \$140,000 appropriation for the Panama-Pacific Exposition. At the present writing there would appear to be a possibility that a large portion of this allowance will remain unexpended. Should such prove to be the case, a valuation of \$150,000,000 for the State will probably not be required in full. When definite information on this point is available, it will be given full consideration by the Tax Commission in placing the 1914 assessment valuation.

Explanatory of Table No. 2, Immediately Following

All columns are self-explanatory with the exception of one headed "Estimate Required 1914." In many cases therein is shown lesser amounts than appear in column headed "Balance in Fund 1914." This is due to the fact that the estimates were made arbitrarily by the Tax Commission from best information obtainable as to the actual needs of the various funds or departments. In many cases consultation was held with those having in charge the expenditure of appropriations and their estimates accepted as the actual requirements for 1914.

It will be noted the total balance in funds 1914, exclusive of those funds provided for especially in the tax levy, shows \$758,502.11, while the estimated requirements, figured on same basis, appears as \$541,538.46. This would indicate a contemplated reversion from these funds of \$216,963.65. Of this amount, assuming the Tax Commission's estimates to be correct, there would automatically revert \$67,061.67, due to the fact that this is the difference between balance in funds and estimated requirements accruing from the General Appropriation Act, which requires no special legislative enactment to throw it back into the General Fund. This leaves a contemplated reversion of \$149,901.98 from special appropriations, which cannot revert without special legislative enactment.

In the foregoing figures no account is taken of the Panama-Pacific Exposition Fund which is covered by a special Act and is taken care of in the general tax levy. Any portion of this which reverts must do so by special legislative enactment. This feature of the budget is covered in detail in another portion of this report.

It is earnestly hoped that those having charge of the expenditure of the various funds will be enabled to keep within the estimates of 1914 requirements shown in budget, and that the Legislature will see that a proper reversion of overplus is accomplished.

TABLE NO. 2
Budget of Estimated State Expenditures, 1914

Purpose of appropriation	Appropriation	Expended 1913	Balance in fund 1914	Estimate required 1914
Legislative Fund	\$30,000.00	\$30,000.00		
Legislative Fund	10,000.00	10,000.00		
Deficiencies 1911-1912	5,330.36	5,330.36		
Legislative Fund	25,000.00	25,000.00		
Relief of T. B. Ramsey	800.00	800.00		
Loss U. S. property	181.40	181.40		
Crittenton Mission	4,800.00	1,800.00	\$3,000.00	\$3,000.00
Relief of W. Bowen	720.00	300.00	420.00	420.00
Care of G. A. R. Cemetery	300.00	150.00	150.00	150.00
Relief of T. N. Evans	249.00	249.00		
State Agricultural Society	13,000.00	7,999.55	5,000.45	5,000.45
Relief of Geo. E. Anderson	227.95	227.95		
Carried forward	\$90,608.71	\$82,038.26	\$8,570.45	\$8,570.45

TABLE No. 2—Continued

Purpose of appropriation	Appropriation	Expended 1913	Balance in fund 1914	Estimate required 1914
Brought forward	\$30,608.71	\$32,088.26	\$8,570.45	\$8,570.45
Linoleum, office of Secretary of State	185.00	185.00		
Relief of Julius Huebner	48.00	48.00		
Employment convicts Prison Farm	2,000.00	590.60	1,409.40	600.00
Equipment Attorney-General's office	450.00	433.00	17.00	
Relief of A. B. Lightfoot	137.85	137.85		
Relief of Dr. T. F. Richardson	1,350.00	1,350.00		
Legislative Fund	10,000.00	5,167.72	4,832.28	
Nevada Tax Commission	26,800.00	11,724.37	15,075.63	15,075.63
Silver service battleship "Nevada"	5,000.00		5,000.00	5,000.00
<i>General Appropriation Bill</i>	<i>\$136,559.56</i>	<i>\$101,654.80</i>	<i>\$34,904.76</i>	<i>\$29,246.08</i>
Salary Governor	8,000.00	4,000.00	4,000.00	4,000.00
Salary Secretary	4,800.00	2,400.00	2,400.00	2,400.00
Salary Clerk	2,400.00	1,200.00	1,200.00	1,200.00
Salary Secretary of State	4,800.00	2,400.00	2,400.00	2,400.00
Salary Deputy Secretary of State	4,800.00	2,400.00	2,400.00	2,400.00
Salary Clerk, Secretary of State	4,000.00	2,000.00	2,000.00	2,000.00
Salary Stenographer, Secretary of State	2,400.00	1,200.00	1,200.00	1,200.00
Salary Typists, Secretary of State	7,200.00	3,600.00	3,600.00	3,600.00
Salary Assistant Librarian	3,600.00	1,800.00	1,800.00	1,800.00
Salary State Controller	4,800.00	2,400.00	2,400.00	2,400.00
Salary Deputy State Controller	4,000.00	2,000.00	2,000.00	2,000.00
Salary Typist, State Controller	2,400.00	1,200.00	1,200.00	1,200.00
Salary State Treasurer	4,800.00	2,400.00	2,400.00	2,400.00
Salary Deputy State Treasurer	4,000.00	2,000.00	2,000.00	2,000.00
Salary Clerk, State Treasurer	2,400.00	1,200.00	1,200.00	1,200.00
Salary Attorney-General	4,000.00	2,000.00	2,000.00	2,000.00
Salary Mineral Land Commissioner	5,000.00	2,500.00	2,500.00	2,500.00
Salary Deputy Attorney-General	4,800.00	2,400.00	2,400.00	2,400.00
Salary Typist, Attorney-General	2,400.00	1,200.00	1,200.00	1,200.00
Salary Justices Supreme Court	36,000.00	18,000.00	18,000.00	18,000.00
Salary Reporter of Decisions	1,200.00	600.00	600.00	600.00
Salary Official Reporter	3,000.00	1,500.00	1,500.00	1,500.00
Salary Stenographers, Supreme Court	6,000.00	3,000.00	3,000.00	3,000.00
Salary Bailiff, Supreme Court	1,500.00	144.00	1,356.00	150.00
Salary Lieutenant-Governor as Adjutant-General	3,600.00	1,800.00	1,800.00	1,800.00
Salary Clerk Supreme Court	4,800.00	2,400.00	2,400.00	2,400.00
Salary Deputy Clerk Supreme Court	3,600.00	1,760.00	1,840.00	1,800.00
Salary Superintendent State Printing	6,000.00	3,000.00	3,000.00	3,000.00
Salary Bookkeeper, Superintendent State Printing	2,400.00	1,200.00	1,200.00	1,200.00
Salary Mine Inspector	7,200.00	3,600.00	3,600.00	3,600.00
Salary Superintendent and Matron of the Orphans' Home	4,800.00	2,316.20	2,483.80	2,400.00
Salary Warden State Prison	6,000.00	3,000.00	3,000.00	3,000.00
Salary Superintendent Hospital for Mental Diseases	4,800.00	2,400.00	2,400.00	2,400.00
Salary Railroad Commissioners	24,000.00	11,500.00	12,500.00	12,000.00
Salary Janitor, Capitol	2,600.00	1,300.00	1,300.00	1,300.00
Salary Watchman, Capitol	2,640.00	1,320.00	1,320.00	1,320.00
Salary Gardener, Capitol	2,600.00	1,300.00	1,300.00	1,300.00
Salary Fireman, Capitol	2,600.00	1,300.00	1,300.00	1,300.00
Salary Teacher, Virginia School Mines	4,000.00	2,000.00	2,000.00	2,000.00
Salary State Engineer	7,200.00	3,600.00	3,600.00	3,600.00
Salary Bank Examiner	10,000.00	5,000.00	5,000.00	5,000.00
Salary and expenses Banking Board	7,000.00	1,575.93	5,424.07	1,600.00
Salary Secretary State Board of Health	3,000.00	1,500.00	1,500.00	1,500.00
Salary Engineer Public Service Commission	7,200.00	3,600.00	3,600.00	3,600.00
Traveling expenses of the Governor and Attorney-General	2,400.00	410.35	1,989.65	1,989.65
Repairs to Governor's Mansion	1,000.00	969.04	40.96	40.96
Text-Book Commission	250.00		250.00	
Teachers' examinations	1,500.00	322.33	1,177.67	325.00
Tuition and support deaf and blind	8,000.00	2,054.39	5,945.61	2,100.00
Support Virginia School of Mines	1,000.00	522.85	477.15	477.15
Expenses Deputy Superintendents Schools	10,060.00	3,736.95	6,313.05	4,000.00
Indexing and compiling Reports	1,400.00	700.00	700.00	700.00
Publication of decisions and advertising	5,400.00	2,475.00	2,925.00	2,500.00
Traveling expenses District Judges	9,000.00	2,192.84	6,807.16	2,300.00
Support State Printing Office	45,000.00	24,523.85	20,476.15	20,476.15
Support Bookbinding	6,500.00	3,478.08	3,021.92	3,021.92
Printing and binding Reports	3,600.00	2,417.12	1,182.88	1,182.88
Material and repairs, printing	1,000.00	94.76	905.24	905.24
Support of Orphans' Home	32,000.00	12,563.96	19,346.04	13,000.00
Repairs at Orphans' Home	2,500.00	948.46	1,551.54	1,000.00
Physician, Orphans' Home	1,800.00	825.00	975.00	800.00
Carried forward	\$513,299.56	\$278,985.91	\$234,313.65	\$203,735.03

TABLE NO. 2—Continued

Purpose of appropriation	Appropriation	Expended 1913	Balance in fund 1914	Estimate required 1914
Brought forward.....	\$513,299.56	\$278,985.91	\$234,313.65	\$208,735.08
Support of Hospital Mental Diseases.....	95,000.00	46,056.29	48,943.71	48,943.71
Repairs at Hospital Mental Diseases.....	2,000.00	1,995.60	4.40	4.40
Relief of discharged patients.....	400.00	90.00	310.00	100.00
Chaplains, Hospital Mental Diseases.....	480.00	190.00	290.00	200.00
Books, Hospital Mental Diseases.....	200.00	79.80	120.20	80.00
Support Nevada State Prison.....	145,000.00	62,867.50	82,132.50	65,000.00
Death Watch, Nevada State Prison.....	5,000.00	1,568.83	3,431.67	
Miscellaneous repairs.....	25.00	19.85	5.15	
Laundry, State Prison.....	2,000.00	1,646.16	353.84	
Hospital, State Prison.....	2,500.00	1,063.98	1,446.02	1,446.02
Improvements, Prison and Farm.....	33,100.00	9,679.14	23,420.86	12,000.00
Support Nevada State Police.....	12,500.00	12,500.00		
Rewards by Governor.....	2,000.00		2,000.00	
Expenses Railroad Commission.....	15,000.00	5,880.47	9,169.53	6,000.00
Traveling expenses Mine Inspector.....	4,000.00	1,231.90	2,768.10	1,250.00
Office expenses Mine Inspector.....	3,000.00	1,318.46	1,681.54	1,681.54
State Board of Assessors.....	4,000.00	1,667.45	2,342.55	
Support Nevada Historical Society.....	5,000.00	2,032.43	2,967.57	2,967.57
Support of University.....	30,500.00	22,962.62	7,637.38	7,637.38
Support of State Analytical Laboratory.....	4,100.00	1,406.72	2,693.28	1,500.00
Support of Summer School, U. of N.....	2,000.00	1,000.00	1,000.00	1,000.00
Library Building, U. of N.....	10,000.00	7,668.82	2,331.18	2,331.18
Dairy Building, U. of N.....	4,800.00	4,272.00	528.00	528.00
Regents' Fund, U. of N.....	4,000.00	447.50	3,552.50	1,000.00
U. of N. Experiment Station.....	5,000.00	1,060.00	3,950.00	3,950.00
U. of N. State Hygienic Laboratory.....	10,000.00	3,726.62	6,273.38	8,750.00
U. of N. Food and Drug Control.....	10,000.00	3,903.03	6,096.97	6,096.97
U. of N. Weights and Measures.....	4,000.00	1,090.92	2,909.08	2,909.08
Insurance on public property.....	3,600.00	160.00	3,440.00	3,340.00
Stationery, fuel and light.....	10,000.00	4,296.98	5,703.02	4,300.00
Current expenses.....	10,000.00	4,258.76	5,741.24	4,300.00
Grounds and waterworks.....	3,000.00	1,994.59	1,005.41	1,005.41
Repairs on Capitol Building.....	3,000.00	40.95	2,959.05	
Election expenses.....	1,200.00		1,200.00	1,200.00
Care military property.....	3,000.00	907.10	2,092.90	1,000.00
Salary Deputy Mine Inspector.....	4,800.00	2,200.00	2,600.00	2,400.00
Salary Secretary Railroad Commission.....	4,800.00	2,400.00	2,400.00	2,400.00
Expense Teachers' Institutes.....	1,000.00	477.10	522.90	522.90
Support State Board of Health.....	5,000.00	929.96	4,070.04	1,000.00
Support State Fish Commission.....	11,500.00	8,468.84	3,031.16	8,039.16
State Controller, collections.....	3,000.00		3,000.00	
Expense Public Service Commission.....	5,000.00	1,491.39	3,508.61	1,500.00
Expert accountant.....	2,400.00		2,400.00	2,400.00
Receiving Hospital (H. M. D.).....	5,000.00	3,994.09	1,065.91	1,065.91
Moving-picture machine (H. M. D.).....	1,000.00	863.78	136.22	
Outhouses (H. M. D.).....	2,000.00	1,344.66	655.34	655.34
Hydrographic survey.....	5,000.00		5,000.00	
Water investigation.....	5,000.00	1,823.18	3,176.82	3,176.82
Water law.....	30,000.00	16,393.06	13,606.94	13,606.94
G. A. R. Encampment.....	2,500.00		2,500.00	
Relief of Guy Guinan.....	22.40	22.40		
Fire protection for Capitol.....	1,000.00	45.50	954.50	
Elko County Dry Farm.....	8,000.00	3,988.56	4,011.44	4,011.44
Lincoln County Experiment Farm.....	6,000.00	4,301.87	1,698.13	1,698.13
Maintenance Governor's Mansion.....	6,000.00	2,750.00	3,250.00	3,250.00
Deficiencies.....	55.30	55.30		
Governors' Conference.....	450.00	300.00	150.00	
Repairs Governor's Mansion.....	2,000.00	691.72	1,308.28	
Vacuum cleaner, Capitol.....	150.00	130.00	20.00	
Relief, Mrs. M. B. Johnson.....	39.60	39.60		
Relief, D. P. Randall.....	103.40	103.40		
Water measurements.....	4,000.00	2,060.26	1,949.74	1,949.74
Relief, Zellerbach Paper Company.....	53.95	53.95		
Relief, D. P. Randall.....	110.50	110.50		
Relief, City of Reno.....	742.50	742.50		
County Agricultural Association.....	5,000.00		5,000.00	1,000.00
Investigation State Bank and Trust Co.....	5,000.00	3,825.65	1,174.35	1,000.00
Relief, Flanigan Warehouse Company.....	800.75	800.75		
Mineral Cabinet, U. of N.....	458.00	458.00		
Relief of Lincoln County.....	4,486.90		4,486.90	
Orphans attending public school.....	3,000.00	1,166.65	1,833.35	1,200.00
Capitol extension.....	60,000.00	5,106.00	54,894.00	54,894.00
Cement walks, Capitol grounds.....	2,000.00		2,000.00	
Quarantine regulations.....	3,000.00	61.60	2,938.40	100.00
Care and education feeble-minded.....	1,000.00	83.63	916.37	100.00
<i>Special Acts 1907—General Fund</i>	\$1,164,077.86			
Relief, Wellington Bowen.....	50.00	50.00		
Carried forward.....	\$1,164,127.86	\$557,663.78	\$606,474.08	\$495,226.67

TABLE NO. 2—Continued

Purpose of appropriation	Appropriation	Expended 1913	Balance in fund 1914	Estimate required 1914
Brought forward	\$1,164,127.86	\$557,653.78	\$606,474.08	\$495,286.67
<i>Special Acts 1908—General Fund</i>				
Nevada State Police	59,819.86	3,649.19	55,670.67	16,300.00
Traveling expenses Governor and Attorney-General	1,886.30	781.00	1,105.30	1,105.30
<i>Special Appropriation Acts, 1909</i>				
Governor Sparks, portrait	500.00	—	500.00	—
Support of irrigation	13.98	—	13.98	—
Prison walls, repairing	11,856.70	—	11,856.70	1,856.70
Filing cases, State Land Office	2.73	—	2.73	—
Printing Office, typesetting machine	1,186.50	213.32	973.18	973.18
Prison machinery	46,002.00	316.30	45,685.70	5,685.70
Repairs to Capitol and Printing Office	142.04	—	142.04	—
<i>Special Acts of 1911</i>				
Rewards by Governor	5,000.00	—	5,000.00	—
Concrete floor, Library	8.22	—	8.22	—
Florence Crittenton Mission	400.00	400.00	—	—
New roads, Washoe County	3,147.84	3,143.21	4.13	—
Additional land, Governor's Mansion	1,000.00	—	1,000.00	—
Support Bureau of Industry	5,397.16	3,891.74	1,505.42	1,505.42
Support Carey Act	3,171.31	1,819.17	1,352.14	1,352.14
Repairs, legislative chambers	230.56	147.14	83.42	—
Horses, State Police	2,462.00	—	2,462.00	—
Helmets, Mine Inspector	888.19	—	888.19	—
Normal Training Schools	3,633.45	2,933.40	700.05	700.05
Examining accounts state officers	1,020.00	1,020.00	—	—
Virginia City School of Mines	465.88	30.38	435.50	50.00
Measurement of water	4.06	3.96	.10	—
Orphans' Home, water tank	85.55	—	85.55	—
Orphans' Home, fire escape	157.54	—	157.54	—
Orphans' Home, periodicals	100.00	—	100.00	—
Orphans' Home, piano	47.00	—	47.00	—
Filing-cases, State Controller's office	1,350.00	—	1,350.00	—
Filing-cases, Adjutant-General	1,023.00	887.00	636.00	—
Filing-cases, Supt. Public Instruction	24.08	—	24.08	—
Historical Society	117.47	117.47	—	—
<i>Special Acts, 1912</i>				
Printing and binding Revised Laws	111.09	111.09	—	—
<i>Miscellaneous</i>				
State Board of Revenue	3,000.00	—	3,000.00	—
Salary Commissioner Bureau of Industry	8,100.00	4,500.00	3,600.00	3,600.00
Printing and binding Nevada Reports	482.84	482.84	—	—
Salary, License and Bullion Tax Agent	551.65	551.65	—	—
Salary State Auditor	71.00	71.00	—	—
Total General Fund	\$1,326,587.35	\$582,223.63	\$744,363.72	—
ALL OTHER FUNDS, 1913				
<i>General Appropriation Bill</i>				
Salary Surveyor-General	4,800.00	2,400.00	2,400.00	2,400.00
Salary Deputy Surveyor-General	4,000.00	2,000.00	2,000.00	2,000.00
Salary Draughtsman, State Land Office	4,000.00	2,000.00	2,000.00	2,000.00
Salary Typist, State Land Office	2,400.00	1,200.00	1,200.00	1,200.00
Salary Clerks, State Land Office	4,000.00	1,833.30	2,166.70	1,833.30
Salary Superintendent Public Instruction	4,000.00	2,000.00	2,000.00	2,000.00
Salary Typist, Superintendent of Public Instruction	2,400.00	1,200.00	1,200.00	1,200.00
Purchase township plats	300.00	22.50	277.50	25.00
Traveling expenses Superintendent Public Instruction	1,500.00	606.81	894.19	625.00
Totals	\$1,353,987.35	\$595,485.24	\$758,502.11	—
<i>Special Appropriations Provided in State Tax Levy, 1913-1914</i>				
Exposition Fund	\$140,000.00	—	—	\$2,000.00
State Loan Interest and Redemption Fund	—	—	—	15,000.00
State School Fund (county settlements)	—	\$71,175.00	—	71,175.00
Territorial Bond Interest Fund	—	19,000.00	—	19,000.00
Contingent University Fund	—	83,570.00	—	83,570.00
Nevada School of Industry Fund	—	—	—	25,000.00
Carried forward	—	—	—	\$847,283.46

TABLE NO. 2—Continued

Purpose of appropriation	Appropriation	Expended 1918	Balance in fund 1914	Estimate required 1914
Brought forward				\$847,288.46
<i>Miscellaneous Expenditures</i>				
State Library Fund		\$12,485.99		12,500.00
Judicial Salary Fund		46,000.00		46,000.00
Withdrawals, land deposits		50.00		50.00
University of Nevada 90,000-Acre Grant		\$63.58		4,000.00
Support of public schools		216,959.12		216,959.12
State's proportion county salaries				32,000.00
Sheep inspection				11,878.42
Total estimates required, 1914				\$1,170,169.00

INHERITANCE TAX

The Act creating the Tax Commission provided that among its various duties the Commission should take charge of and superintend the enforcement of any direct or collateral inheritance-tax law that may be enacted and the collection of taxes which may be due the State thereunder. In compliance therewith, the Commission at once communicated with the District Judges throughout the State relative to enlisting their cooperation in the proper and full administration of the law governing the inheritance tax, and in all instances received ready assurances of earnest support. The Judges in every district at once issued orders that the Clerk of the court supply the Commission with a complete list of estates filed for probate, the names of the appraisers for the estate, the names of appraisers for the State, and a copy of the final account and order for distribution, giving list of beneficiaries, amount distributed, and inheritance tax paid. In all cases wherein the estates have been large enough to come within the inheritance-tax law, the court reports show said tax to have been paid before the order for final distribution was made, and that the files pertaining to this class of taxation and as reported from the different judicial districts throughout the State are complete.

It is yet too early to give specific figures on revenue to be derived from this source; although it is estimated, as appears in the budget herein, that an amount of \$2,000 will be forthcoming during the year 1914.

TAXATION OF MINES

Section 9 of the Tax Commission Act is as follows:

In pursuance of the general supervision and control over the revenue system of the State, said Commission is hereby empowered to investigate and determine the net proceeds of all operating mines. In pursuance whereof, said Commission, in each instance, shall investigate and determine from all obtainable data, evidence, and reports, the gross value of the bullion actually extracted from the reduction of the ores and the proceeds from the sale of the ores, of any mine, mining claim, or patented mine, and to deduct therefrom only such actual costs of extraction, transportation, reduction or sale of ores, as shall be deemed by said Commission to be just, proper, and reasonable, and not introduced to deprive or defraud the State of any portion of its just revenue; and in any suit at law arising under the provisions of this section, the burden of proof shall be upon the owner of such mine, mining claim, or patented mine to establish that any item of cost disallowed by said Commission, is, nevertheless, just, proper, and reasonable, and not entered to defraud the State.

In compliance with the law the Tax Commission set about the procuring of all data pertinent to the subject, calling for the reports made

by each producing company to its stockholders for the preceding year, and for a report, in considerable detail, to the Commission itself. The majority of the largest producers were found to be maintaining secondary milling and transportation corporations designed to reduce the "net proceeds" shown on the mine books and thus defeat the bullion tax. That such a condition existed was well known—the separate milling company was a time-honored institution which came down as a legacy from the Comstock—but there was not, prior to the creation of the Tax Commission, any success attendant on the efforts of those state and county officers who tried to correct the abuse.

The broad powers conferred on the Tax Commission by the section quoted put it in a better position to handle the question, but before a definite plan had been decided the Nevada Mine Operators' Association, representing nearly all of the large producing companies of the State, suggested a conference between its executive committee and the Tax Commission. This conference was begun on August 11, 1913, when a general interchange of ideas took place, the mine operators contending that until all property was assessed at its full cash value, as provided by law, the mines were entitled to some relief from a tax against their full net proceeds. To effect such equalization it was proposed by the mine operators that for 1913 the mines would abolish their milling and transportation subdivisions, and report the actual "net proceeds" from all of their operations, but that a flat charge of \$3 per ton should be allowed in addition to the legal deductions from the value of the gross yield in figuring the net, this flat charge to reduce to \$2 in 1914, and to \$1 in 1915 and thereafter. The Tax Commission rejected this proposal on the ground that many companies in the State entitled to pay bullion tax were not making \$3, \$2, or even \$1 per ton in profit and would by the operation of any flat-rate exemption be relieved from the payment of any taxes at all.

The mine operators also contended for a depreciation allowance calculated to write off the actual shrinkage in value on their plants.

After a careful consideration of the matter the Commission on September 9, 1913, proposed the following rule for the assessment of mines for 1913:

AGREEMENT

The Nevada Tax Commission proposes the following procedure, for general adoption throughout the State, in assessing the mining industry for taxation during and covering the entire year 1913:

IMPROVEMENTS

To be assessed as other property is assessed in the county in which it is situated.

ASSESSMENT OF THE NET PROCEEDS OF MINES

The net proceeds of any mine shall be determined as follows:

From the actual value of the gross yield (in any quarter) shall be deducted the sum of the following items of expense:

(1) *Management—*

All necessary current administrative expenses, excepting:

(a) Federal, state, or county taxes.

(b) Payments of interest on bonds or other indebtedness.

(c) Expenses of maintaining offices other than the mine office.

(2) *Cost of Extracting—*

(a) All necessary current mining expense (not including apportionment of general administrative expense) including expense of contemporaneous development and exploration of the mine itself.

- (b) A depreciation charge which shall be equivalent to the quarterly installment of the amount calculated to be written off annually to redeem 80% of the original and all subsequent investments in mine plant or improvements (not including repair and maintenance charges against operation account), within the entire estimated life of the plant, including the time during which it has been used plus its estimated residual life which may equal but not exceed the estimated life of the mine. Such depreciation or redemption charges shall cease when 80% of any investment in improvements shall have been charged off in the manner provided in the foregoing.

(3) Cost of Transportation—

Where the transportation facilities used in conveying the mine products from the mine to the place of reduction or sale are owned directly or indirectly by the company:

- (a) The actual expense of operating such plant facilities, exclusive of general or administrative expense.
(b) A depreciation charge calculated in each case to redeem 80% of the original investment in transportation facilities, in the same manner as mine-plant depreciation is figured.

Where the said mine products are transported by common carrier or by facilities not owned by the company and from which it derives no revenue:

- (a) The actual amount paid for the carriage of the said mine products with no allowance for depreciation.

(4) Cost of Reduction or Sale—

Where the reduction works in which the mine products are treated are owned directly or indirectly by the company:

- (a) The actual expense of reduction or treatment or sale of product, exclusive of general or administrative expense.
(b) A depreciation charge calculated in each case to redeem 80% of the investment in reduction works in the same manner as mine-plant depreciation is figured.

Where the mine products are treated in plants not owned by the company and from the operation of which it derives no revenue:

- (a) The actual amount paid for the treatment or reduction of the ores, and marketing of the product, with no allowance for depreciation.

The sum of items (1), (2), (3), and (4) shall constitute the offset deduction from the gross yield for the determination of the actual net yield, and the remainder shall be the actual net yield for the purpose of taxation and to assess the mining industry on the same percentage of actual value as that at which other property is assessed, which is determined for 1913 as 60% of the actual cash value as an average for the State. A further deduction from the value of the gross yield equivalent to 40% of the actual net yield, as hereinbefore defined, shall be allowed and this shall be charged to management, extraction, transportation, reduction and sale, in equal proportions to each of the four said items.

The acceptance of this proposal by the Nevada Tax Commission as its rule of action, in fixing the assessment of the net yield of all mines of the State, shall be absolutely contingent on the entire abolition of the so-called secondary milling and transportation companies, as far as the statements and accounts rendered the said Commission are concerned.

The mine operators formally accepted this rule at said conference held on September 9, 1913.

The question of the proper depreciation allowance in each case at once resulted in a very active correspondence between the Commission and the various companies. It was found that, despite the clear wording of the rule, nearly every mine accountant had his own views on the subject, and to standardize the matter required considerable time and patience. At the end of the year a second set of report blanks were sent out to all producers, which were filled out and returned in nearly all cases, the adjustment of the year's tax being made on these reports. Some controversy still exists in a few cases which will have to be straightened out on the ground, but Table No. 3 gives the essential information as to the results of the 1913 assessment.

This rule, while experimental, was in the main satisfactory. The actual assessment levied against the net proceeds of mines was greatly less in 1913 than it was in the preceding year, but the percentage of the actual net proceeds assessed was higher, the shortage resulting from a decreased net production in 1913 as shown by the following table, which gives the dividends paid by the Nevada properties whose stocks are listed on the various boards:

DIVIDENDS PAID BY NEVADA MINES		
	(Listed Stocks Only)	
	1912	1913
Goldfield Consolidated.....	\$5,694,621	\$1,067,729
Nevada Consolidated.....	2,348,167	2,248,167
Nevada Douglas.....		125,000
Nevada Wonder.....		217,800
Pittsburg Silver Peak.....	505,800	167,400
Montana-Tonopah.....	100,000	100,000
Tonopah Extension.....	47,172	117,875
Tonopah Mining.....	1,600,000	1,450,000
Tonopah Belmont.....	1,500,000	1,650,000
Seven Troughs Coalition.....	36,125	
Ophir G. & S. M. Co.....	20,000	
Round Mountain M. Co.....		36,560
Totals.....	\$11,851,886	\$7,179,531

The foregoing list, while incomplete, is believed to reflect pretty accurately the relative net earnings of the mining industry in the two years.

From the Controller's report it appears that the net proceeds of mines were assessed in 1912 for \$8,732,859.36, the state tax receipts from this assessment being \$56,574.94. From Table No. 3 herein, the assessment for 1913 appears to have been \$5,924,074.92, and the state tax thereon \$182,076.37, or an apparent increase, due primarily to the elimination of the secondary milling and transportation corporations, of \$125,501.43.

In two of the southern counties there had been considerable controversy between the producing mining companies and the local assessing authorities over the amount of bullion tax which should have been paid during the preceding two years. Through the efforts of the Commission an amicable adjustment of this matter was arrived at along the general lines of the 1913 agreement, without recourse to long and expensive litigation. This resulted in the payment of back bullion taxes aggregating in the neighborhood of \$60,000.

In view of the substantial increases which were to be made on all other classes of property in 1914, the Tax Commission early in the year notified the mines that they could take their choice of two alternative propositions for the 1914 assessment—(1) the assessment of 80% of the net proceeds determined as in 1913, or (2) the assessment of 60% of the net without depreciation. This announcement resulted in a vigorous protest from the mine operators, who contended for "depreciation" as a legal right, and for a 60% assessment after the employment of this depreciation. The negotiations looking to an amicable settlement of these differences continued until about the middle of May, when the question of "depreciation" was submitted to the Attorney-General, the latter deciding that it was not authorized by the statute governing. The mine operators meanwhile having expressed a willingness to submit to the rulings of the Attorney-General in the matter, elected to accept the 60%

basis without depreciation, and the following resolution was adopted by the Tax Commission as its rule for the assessment of mines in 1914:

The net proceeds of any mine shall be determined as follows:

From the actual value of the gross yield in any quarter-year shall be deducted the following items of expense incurred in the same quarter:

(1) *Management*—

All ordinary and necessary administrative expense, excepting:

(a) Payments on principal or interest on bonds or other indebtedness.

(b) The expense of maintaining offices outside of the State of Nevada.

(2) *Mining*—

All ordinary and necessary expenditures actually made for mining (exclusive of general or administrative expenses) including the cost of contemporaneous development and exploration of the mine itself.

(3) *Transportation*—

(a) Where the transportation facilities used in conveying the mine products from the mine to the place of reduction or sale are owned or controlled directly or indirectly by the company: The actual cost of operating such plant facilities, exclusive of general or administrative expense.

(b) Where the mine products are treated in reduction works owned or controlled directly or indirectly by the mining company: The actual expense of reduction or treatment or sale of the said products.

The actual necessary expenditures for the maintenance and repair of mine, transportation and milling or reduction plants may be included in the foregoing deductions, but no charge whatever for depreciation or the redemption of any investment in mine ground, development done prior to the quarter for which the report is made, or plant construction shall be allowed.

The sums of items (1), (2), (3), and (4) shall constitute the offset deductions against the value of the gross yield, and the difference in each case between the said gross yield and the said sum shall be deemed the net proceeds for the purpose of taxation.

To equalize the mine assessment with that of other property, 60% of the net proceeds determined as provided in the foregoing shall be assessed—this rule applying to all mines from which the ore is extracted directly by the owners. In the case of producing "leases" the lessee shall be entitled to deduct, in addition to the items enumerated, the royalties actually paid to the lessor, but royalties received by any lessor shall be reported separate from other receipts and 60% thereof shall be assessed with no deduction whatever.

TABLE No. 3

Statement of Mineral Production by Counties for the Year 1913, with Offset Deductions Allowed for Bullion-Tax Purposes, Net Assessment Value, and Tax Accrued.

County	Tonnage	Gross yield	Offset deductions	Net assessment value	Tax accrued
Churchill.....	82,806	\$1,061,628.94	\$926,860.23	\$169,206.08	\$4,359.29
Clark.....	25,316	595,806.26	452,628.06	147,116.90	3,080.62
Elko.....	106	3,436.31	3,656.00		
Eureka.....	42,856	192,887.65	212,639.96	3,622.27	68.46
Esmeralda.....	541,996	5,869,763.54	4,339,674.10	1,601,008.59	48,070.08
Humboldt.....	18,008	552,995.44	579,206.98	37,801.96	666.63
Lander.....	Placer	19,965.19	26,210.81		
Lincoln.....	91,226	886,127.48	872,370.30	30,519.41	1,227.27
Lyon.....	209,148	1,700,616.91	1,603,219.05	101,016.88	2,081.13
Mineral.....	20,139	213,311.20	240,157.16	7,377.22	181.47
Nye.....	643,396	9,341,263.89	7,177,235.31	2,326,883.26	91,909.37
Storey.....	134,281	1,181,627.21	1,139,849.99	167,170.17	6,809.63
Washoe.....	194	6,720.65	5,444.93	1,275.72	21.17
White Pine.....	3,476,366	11,076,372.86	9,834,546.56	1,331,127.51	28,652.35
Totals.....	5,296,338	\$32,701,522.47	\$27,413,698.44	\$5,924,074.92	\$182,076.37

NOTE—Bullion-tax statements are rendered quarterly and the statutes specifically provide that each quarter must stand on its own footing, i. e., a loss incurred during one quarter cannot be used as an offset deduction against operations for succeeding quarter. Hence the apparent discrepancy indicated by crossfooting the foregoing statement.

HEARINGS

Owing to the fact that the Tax Commission was not created until March 20, 1913, no January meeting could be held for that year. The Commission devoted its time and energies to perfecting its organization and gathering data from the time of its birth until the date of its first sitting as a final State Board of Equalization, beginning the second Monday in October, 1913. In the meantime such assistance was rendered the various County Assessors as was possible, and, in certain individual and class cases, tentative instructions were given as to assessment values invariably showing material increases over 1912. These were not all sustained by the Commission's final determinations in October, but in the aggregate the October session resulted in a very material increase over the 1912 assessment.

Particular mention should be made here of the bank showing in the following tabulations, which would indicate a decrease made by the Tax Commission in the assessment value from that placed by the various Assessors for the year 1913, of \$41,053. This is misleading in that the value placed by the Assessors was under tentative instructions from the Tax Commission in an effort to apply a uniform rule to this class of property, and such assessment showed a heavy increase over that for 1912. When the Commission met as a final State Board of Equalization in October, 1913, it was found this uniform rule was inequitable, and the results shown by the following bank tabulation was arrived at from the best information obtainable at the time. A comparison of these final results with the bank assessment for 1912 is not made, for the reason that the Commission overlooked securing the 1912 data, and it is now too late to get it for insertion in this report. However, it is a known fact that the final total bank assessment for the year 1913 is considerably in excess of that for the year 1912.

Following are the

Minutes of the Meeting of the Nevada Tax Commission, Sitting as a State Board of Equalization, in Accordance with Section 3 of "An Act in Relation to the Public Revenues, Creating the Nevada Tax Commission, Defining its Powers and Duties, and Matters Relating Thereto, and Repealing All Acts and Parts of Acts in Conflict Herewith," Approved March 20, 1913, Commencing Monday, October 13, 1913, at the Hour of 10 a. m.

Present—J. F. Shaughnessy, Chairman; Emmet D. Boyle, Commissioner; C. H. Colburn, Commissioner.

Meeting called to order by Chairman Shaughnessy at 10 a. m.

An informal discussion was then held between the members of the Board and the Assessors present relating to the general conditions existing in their respective counties, which discussion lasted until 12 o'clock, when a recess was taken until 2 p. m.

October 13, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Mr. Hobbs, representing the Central Pacific Railway Company, appeared and informed the Board that Mr. Cowden, tax attorney for the Central Pacific, would be in Carson City the next day, and requested a hearing for that time, which was granted.

Assessor Grutt of Mineral County appeared, not having been present at the morning session, and general conditions existing in his county were gone into. At 4 p. m. a recess was taken until 10 a. m., October 14, 1913.

October 14, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

C. G. Patrick, general manager, and Samuel Platt, attorney, appeared on behalf of the Goldfield Consolidated Water Company to show cause why their valuation for assessment purposes should not be increased from \$101,000, as

placed by the Assessor, to \$335,000, in accordance with citation issued by the Nevada Tax Commission. After an exhaustive hearing, the matter was taken under advisement by the Board.

Finding: Final determination, \$150,000.

Mr. Wedertz of Lyon County appeared before the Board to protest against a valuation of \$30 per acre which had been placed against certain lands owned by him, by the Assessor, contending that it should not be to exceed \$20 per acre; and also to protest against being assessed for 6,000 head of sheep when he had turned in to the Assessor but 3,000 head. Mr. Wedertz was placed under oath and his testimony taken. It not being completed at 12 o'clock, a recess was taken until 1:30 p. m. with the understanding that the hearing would be continued at that hour.

October 14, 1913—1:30 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Hearing of protest of Mr. Wedertz continued. Matter taken under advisement by the Board.

Finding: Petition denied.

Assessor Pohe of Lyon County, not having been present at previous sessions, appeared, and general conditions in his county were gone into.

Assessor Pohe presented the claim that 918 cattle belonging to Miller & Lux had inadvertently escaped taxation in his county owing to early shipment; that there was a possibility of these having been assessed in Washoe County, or not at all, and demanded that they be credited to the Lyon County roll. The showing being *ex parte*, it was deemed advisable to leave it open until such time as Miller & Lux or the Pacific Livestock Company had an opportunity of being heard.

Patrick Walsh of Lander County, with W. M. Kearney acting as his attorney in fact, appeared before the board to protest against assessment made by the Assessor in the number of 4,000 head of stock cattle, when he had turned in but 2,000 head. Mr. Walsh was placed under oath, his testimony taken, and the matter taken under advisement by the Board.

Finding: Assessment valuation reduced from \$28,000 to \$16,000.

J. H. Gardner of Ormsby County appeared before the Board to protest against assessment made by the County Board of Equalization against the M. C. Gardner estate, in amount \$4,500, contending it should be reduced to \$1,500. Mr. Gardner was placed under oath, his testimony taken, and the matter taken under advisement.

Finding: Petition denied.

W. S. Simpson of Lyon County appeared before the Board to protest against valuations placed by the Assessor on certain lands owned by him, but making no definite statement as to what, in his opinion, they should be reduced to. After an exhaustive hearing, the matter was taken under advisement by the Board.

Finding: Adjusted by horizontal decrease in Lyon County of \$15 lands to \$7.50, \$7.50 lands to \$5, and \$3 lands to \$2.

At 5 p. m a recess was taken until 10 a. m., October 15, 1913.

October 15, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

D. V. Cowden, tax attorney, and Mr. Skene, representing the Land Department of the Central Pacific Railway Company, appeared before the Board to protest against the proposed horizontal raises in assessment values of lands in Humboldt and Elko Counties. Mr. Skene was sworn, his testimony taken, and the matter taken under advisement by the Board.

Finding: Petition denied.

Charles Henderson, attorney, appeared on behalf of the Western Pacific Railway Company, to protest against the proposed horizontal raises in assessment values of lands in Humboldt and Elko Counties. His presentation was heard, and the matter taken under advisement by the Board.

Finding: Petition denied.

Assessor Seaman of Storey County appeared, not having been present at the previous sessions, and general conditions existing in his county were gone into.

At 12 o'clock a recess was taken until 2 p. m.

October 15, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy, who made the statement that Commissioner Boyle in checking up the Storey County roll had found there were 36,000 acres of Central Pacific unpatented lands in that county assessed at a valuation of 25 cents per acre.

Tax Attorney Cowden, of the Central Pacific Railway Company, being present, he was verbally cited to appear and show cause why the value of this land should not be increased for assessment purposes to \$1.25 per acre, according to law. Mr. Cowden requested an extension of time in which to acquaint himself with the facts, stating that if the question of valuations in another county than the two against which he had already entered protest, was to be raised, it was his desire to contest valuations assessed in every other county in the State where land was owned by his company. The extension was granted with the understanding that he would be heard whenever he was ready.

There being no other property owners desiring a hearing at this time, a recess was taken until 3:30 p. m., when Mr. Cowden and Mr. Skene reappeared and the Central Pacific hearing was continued.

The showing was made that Central Pacific lands in Storey County were worth an average of \$2 per acre, according to appraisalment of their Land Department; the average assessed valuation was unknown. A willingness was expressed to accept whatever percentage of actual valuation was placed on other property in this county, based on this \$2 average appraisalment.

The showing was made that Central Pacific lands in Lander County were worth an average of \$1.78 per acre, according to appraisalment of their Land Department; the average assessed valuation was shown as \$1.94 per acre. Demand was made for an average assessed valuation per acre equal to 45% of \$1.78, claiming this to be the percentage of actual valuation at which other property in the county was assessed.

The showing was made that Central Pacific lands in Eureka County were worth an average of \$1.41 per acre, according to appraisalment of their Land Department; the average assessed valuation was shown \$1.44. The percentage of actual value at which other property in the county was assessed was unknown, but demand was made that Central Pacific lands be placed on that basis, whatever it may be.

The showing was made that Central Pacific lands in Humboldt County were worth an average of \$1.73 per acre, according to appraisalment of their Land Department; the average assessed valuation was shown as \$1.25. Demand was made for an average assessed valuation of 40% of \$1.73, claiming this to be the percentage of actual valuation at which other property in the county was assessed.

The showing was made that Central Pacific lands in Elko County were worth an average of \$1.86 per acre, according to appraisalment of their Land Department; the average assessed valuation was shown as \$1.49. Demand was made for an average assessed valuation equal to 40% of \$1.86, claiming this to be the percentage of actual valuation at which other property in the county was assessed.

The matter was taken under advisement by the Board.

Finding: Petition denied, and Storey County land values increased from \$0,234.63 to \$46,173.14.

At 5 p. m. a recess was taken until 10 a. m., October 16.

October 16, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who wished to be heard, a recess was taken until 2 p. m.

October 16, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who wished to be heard, a recess was taken until 10 a. m., October 17.

October 17, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Joseph Rolph appeared on behalf of the Glasgow and Western Exploration Company and entered a protest against assessment values placed on improvements on mining ground owned by this company in Lander County.

The matter was taken under advisement by the Board.

Finding: Valuation in Lander County reduced from \$23,350 to \$13,100.

At 12 o'clock a recess was taken until 2 p. m.

October 17, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Assessor Ronnow of Lincoln County appeared, not having been present at previous sessions, and general conditions existing in his county were gone into.

At 3 p. m. the Board went into executive session, the results of which appear in appended statement of decisive actions taken.

At 4 p. m. the Board requested Mr. Joseph Rolph, of the Glasgow and Western Exploration Company, to reappear before them, which he did. He was then verbally cited to show cause why the mining claims owned by the Glasgow and Western Exploration Company should not be placed at a valuation for assessment purposes in a sum in excess of the statutory minimum valuation of \$500 per claim, using as a basis for such citation the testimony adduced at the morning hearing. After going into the matter exhaustively, it was taken under advisement by the Board.

Finding: Assessment valuation allowed to stand.

At 5:30 p. m. the Board took a recess until 10 a. m., October 18, 1913.

October 18, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

The Board immediately went into executive session, the results of which appear in appended statement of decisive actions taken.

At 11 a. m. the Board reconvened in open session with all members present.

William Maxwell of Ormsby County appeared before the Board and entered protest against the ruling of the Commission, in accordance with law, that hotel-keepers furnish license collectors with statement of amount of business transacted and procure license on that basis (Sec. 3734, Rev. Laws, 1912). After taking Mr. Maxwell's testimony under oath, the matter was taken under advisement by the Board.

Finding: Statement must be furnished and license paid on gross amount of business transacted.

Hugh H. Brown, attorney at law, appeared on behalf of the T. & G. R. R. Co., and asked information as to the reason for the raise in the assessed valuation of the personal property of this railroad in Esmeralda, Nye, and Mineral Counties, as made by the Assessors. Such information as the Board had was given, after which Mr. Brown agreed that the assessments as rendered by the Assessors be allowed to stand for this year.

Hugh H. Brown, attorney, and Frederick Bradshaw, general superintendent, appeared on behalf of the Tonopah Belmont Development Company and the Belmont Milling Company of Nye County, to show cause why the assessed valuation of the mine plant and supplies should not be increased from \$108,636 to \$270,184, and of the milling plant from \$213,345 to \$260,000, in accordance with citations issued by this Commission on October 14, 1913. At 12 o'clock a recess was taken until 1:30 p. m. with the understanding that the Belmont hearing should be continued at that time, as it was not completed at the morning session.

October 18, 1913—1:30 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

The Belmont hearing was completed and both matters taken under advisement by the Board.

Finding: Final determination—Mine plant and supplies, \$133,000; milling plant, \$245,000.

Hugh H. Brown, attorney, appeared on behalf of the Esmeralda Power Company, to show cause why the assessed valuation of this company should not be raised from \$42,000 to \$160,000, in accordance with citation issued by the Nevada Tax Commission under date of October 14, 1913. After a preliminary presentation of the case, an extension of time was requested in which to secure additional data for submission, which was granted.

Finding: Final determination, \$42,000.

Hugh H. Brown, attorney, appeared on behalf of the Montana-Tonopah Mining Company. He called attention to the fact that a citation had been received,

addressed to the Commonwealth Mining and Milling Company, instructing them to appear and show cause why their assessment valuation should not be raised from \$120,000 to \$125,000; further, that the Commonwealth Mining and Milling Company was a subsidiary corporation controlled by the Montana-Tonopah Mining Company and was located in Arizona. Error in issuance was acknowledged by the Tax Commission and the citation verbally changed to read Montana-Tonopah Mining Company. After presentation of the case, the matter was taken under advisement by the Board.

Finding: Final determination, \$120,000.

At 5 p. m. the Board took a recess until 10 a. m., Monday, October 20, 1913.

October 20, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

J. Clemons appeared on behalf of the Pacific Livestock Company, to protest against the assessed valuations of their lands in Lyon County, as placed by the Assessor. After a full hearing in the matter, it was taken under consideration by the Board.

Finding: Adjusted by horizontal decrease in Lyon County of \$15 lands to \$7.50, \$7.50 lands to \$5, and \$3 lands to \$2.

Henry I. Moore, attorney, appeared on behalf of the Copper Belt Railroad Company, to protest against assessment valuations of rolling stock and equipment of that company as made by the Assessor of Lyon County. After a preliminary presentation of the case, additional time was requested in which to procure additional data, which was granted.

Henry I. Moore, attorney, appeared on behalf of the Nevada-Douglas Copper Company, claiming that they had overpaid in bullion tax during the year 1912, \$508.61, through settlements being made on advance smelter estimates. This was substantiated by a statement of actual smelter returns submitted in evidence. Mr. Moore was informed that the Nevada-Douglas Copper Company would be allowed to make offset deductions from gross yield in following settlements in sufficient amount to adjust the matter.

E. B. Yerlington appeared on behalf of the Carson Water Company, to show cause why the assessment valuation of that company in Ormsby County should not be increased from \$47,275 to \$60,000, in accordance with citation issued by the Tax Commission under date of October 17, 1913. After a detailed hearing, the matter was taken under consideration by the Board.

Finding: Final determination, \$55,000.

At 12 o'clock the Board took a recess until 2 p. m.

October 20, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

C. J. Hall, special agent, appeared on behalf of the Bell Telephone Company of Nevada, to show cause why the assessment valuations of that company in Washoe County should not be increased from \$49,860 to \$115,000; in Storey County from \$5,920 to \$15,000; in Lyon County from \$2,730 to \$4,000; in Humboldt County from nothing to \$11,600; in Churchill County from \$2,590 to \$5,000, and in Ormsby County from nothing to \$1,250, in accordance with citation issued by the Tax Commission under date of October 20, 1913. After a detailed hearing, the matter was taken under advisement by the Board.

Finding: Final determination—Washoe County, \$85,950; Storey County, \$7,500; Lyon County, \$3,500; Churchill County, \$4,500; Humboldt County, \$9,500; Ormsby County, \$1,250.

Henry I. Moore, attorney, appeared for the purpose of completing hearing begun at the morning session in his protest against assessment valuations of rolling stock and equipment of the Copper Belt Railroad Company in Lyon County. After a detailed presentation of the case, it was taken under advisement by the Board.

Finding: Petition denied.

At 5:30 p. m. the Board took a recess until 10 a. m., October 21, 1913.

October 21, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present wishing to be heard, a recess was taken until 2 p. m.

October 21, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

James M. Leonard appeared on behalf of the Justice Gold and Silver Mining Company, to show cause why the assessment valuation of that company should not be increased in Storey County from \$6,070 to \$7,500, in accordance with citation issued by the Nevada Tax Commission under date of October 18, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$6,070.

James M. Leonard, superintendent, appeared on behalf of the Virginia and Gold Hill Water Company, to show cause why the assessment valuations of that company should not be increased in Washoe County from \$99,980 to \$198,000; in Storey County from \$44,223 to \$79,200, and in Ormsby County from \$12,640 to \$52,800, in accordance with citation issued by the Nevada Tax Commission under date of October 20, 1913. After a detailed hearing of the case, it was taken under advisement by the Board.

Finding: Final determination—Washoe County, \$99,980; Storey County, \$55,000; Ormsby County, \$20,000.

Samuel W. Belford, attorney, and Jules Labarthe, general superintendent, appeared on behalf of the Mason Valley Mines Company, to show cause why the assessment valuation of this company should not be raised from \$229,000 to \$380,000 in accordance with citation issued by the Nevada Tax Commission. After a preliminary presentation of the case an extension of time was requested in which to secure additional data, which was granted.

At 4 p. m. the Board took a recess until 10 a. m., October 22, 1913.

October 22, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

J. G. Crumley, general manager, appeared on behalf of the Tonopah Sewer and Drainage Company, to show cause why the assessed valuation of that company should not be increased from \$16,000 to \$25,000, in accordance with citation issued by the Nevada Tax Commission under date of October 17, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$20,000.

At 11 a. m. the Board went into executive session, the results of which appear in appended statement of decisive actions taken.

At 12 o'clock the Board took a recess until 2 p. m.

October 22, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

C. E. Julihn, superintendent, appeared on behalf of the Sierra Nevada Mining Company, to show cause why the assessed valuation of that company should not be increased from \$2,860 to \$4,000, in accordance with citation issued by the Nevada Tax Commission under date of October 18, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$4,000.

Ira Winters of Ormsby County appeared before the Board to protest against the assessed valuation placed against his property by the Assessor. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Petition denied.

Albert W. Walsh appeared on behalf of the United Comstock Pumping Association to show cause why the assessed valuation of that company should not be increased from \$5,191 to \$20,000, in accordance with citation issued by this Commission under date of October 18, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$5,191.

Charles F. Duval of Storey County appeared before the Board to protest against the assessed valuation placed on his personal property by the Assessor. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: See next succeeding determination.

Charles F. Duval appeared before the Board on behalf of the Chollar Leasing Company, to show cause why the assessed valuation of the property of that company (entered in the name of Charles F. Duval on the Virginia City personal roll) should not be raised from \$1,200 to \$2,500, in accordance with citation issued by the Nevada Tax Commission under date of October 18, 1913.

After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination (including Chas. F. Duval, personal), \$1,200.

G. A. Ballard appeared before the Board on behalf of the East Comstock Reduction Company, to show cause why the assessed valuation of the property of that company should not be increased from \$5,191 to \$20,000 in accordance with citation issued by the Nevada Tax Commission under date of October 18, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$5,191.

C. E. Jullihn appeared before the Board on behalf of the Utah Mining Company, to show cause why the assessed valuation of that property should not be increased from \$1,500 to \$2,000, in accordance with citation issued by the Nevada Tax Commission under date of October 18, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$1,500.

At 4:30 p. m. the Board took a recess until 10 a. m., October 23, 1913.

October 23, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who desired a hearing, a recess was taken until 2 p. m.

October 23, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who desired a hearing, a recess was taken until 10 a. m., October 24, 1913.

October 24, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who desired a hearing, a recess was taken until 2 p. m.

October 24, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present who desired a hearing, a recess was taken until 10 a. m., October 25, 1913.

October 25, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

H. E. Freudenthal appeared on behalf of the Prince Consolidated Mining and Smelting Company, to show cause why the assessment valuation placed by the Assessor on mine plant should not be increased from \$5,700 to \$14,000; railroad from \$18,515 to \$50,000; Bullionville improvements from \$3,000 to \$5,000, and stores and fixtures from \$400 to \$1,200, in accordance with citation issued by the Nevada Tax Commission under date of October 21, 1913. After a full hearing of the matter, it was taken under advisement.

Finding: Final determination—Mine plant, \$5,700; railroad, \$18,515; Bullionville improvements, \$3,000; stores and fixtures, \$400.

A. E. Cheney, attorney, appeared on behalf of the Truckee River General Electric Company, to show cause why the assessed valuation of that company should not be increased in Washoe County from \$143,830 to \$490,000, in Ormsby County from \$16,200 to \$42,000, and in Douglas County from \$9,459 to \$11,000, in accordance with citation issued by the Nevada Tax Commission under date of October 20, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination—Washoe County, \$300,000; Ormsby County, \$35,000; Douglas County, \$11,000.

A. E. Cheney, attorney, appeared on behalf of the Reno Power, Light and Water Company, to show cause why the assessed valuation of that company should not be increased from \$252,630 to \$744,500, in accordance with citation issued by the Nevada Tax Commission under date of October 15, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$436,000.

At 12 o'clock the Board took a recess until 1:30 p. m.

October 25, 1913—1:30 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

J. R. Dixon, attorney, appeared on behalf of the Nevada-California Power

Company, to show cause why the assessed valuation of that company in Nye County should not be increased from \$49,385 to \$195,000, and in Esmeralda County from \$121,000 to \$450,000, in accordance with citation of the Nevada Tax Commission under date of October 20, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination—Nye County, \$130,000; Esmeralda County, \$250,000.

Samuel W. Belford, attorney, and Jules Labarthe, general superintendent, appeared on behalf of the Mason Valley Mines Company, supplementing preliminary presentation of showing made under date of October 21, 1913, at which time an extension was granted them for the purpose of securing additional data. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$238,000.

Samuel W. Belford, attorney, appeared on behalf of the Consolidated Copper Company of White Pine County, to protest against an increase of \$5,000 made by the County Board of Equalization over the assessment value, placed by the Assessor, on certain lands owned by that company. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Petition denied.

H. E. Freudenthal appeared on behalf of the Day-Bristol Consolidated Mines Company and entered formal protest against the proposed increase in the assessed valuation of the property of this company from \$10,245 to \$12,000, in accordance with citation issued by the Nevada Tax Commission under date of October 21, 1913. The matter was taken under advisement by the Board.

Finding: Final determination, \$10,245.

At 5:30 p. m. the Board took a recess until 10 a. m., Monday, October 27, 1913.

October 27, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

George A. Bartlett, attorney, and William N. Chatfield, manager, appeared on behalf of the Pacific Power Company, to show cause why the assessed valuation of this company in Mineral County should not be increased from \$36,200 to \$85,000, and in Churchill County from \$19,000 to \$30,000, in accordance with citation issued by the Nevada Tax Commission under date of October 15, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination—Mineral County, \$50,000; Churchill County, \$25,000.

Henry M. Hoyt, attorney, Albert Burch, general manager, and A. H. Howe, secretary, appeared on behalf of the Goldfield Consolidated Mines Company and the Goldfield Consolidated Milling and Transportation Company, to show cause why the assessed valuation of the former should not be increased from \$70,400 to \$525,000, and of the latter from \$220,200 to \$550,000, in accordance with citations issued by the Nevada Tax Commission under date of October 20, 1913. After a full hearing covering both instances, they were taken under advisement by the Board.

Finding: Final determination—Milling plant and railroad, \$300,000; mine plant, \$100,000.

Henry M. Hoyt, attorney, E. A. Jullen, general manager, and Fred J. Siebert, chief engineer, appeared on behalf of the Nevada Hills Mining Company, to show cause why the assessment valuation of that company should not be increased from \$40,000 to \$105,000, in accordance with citation issued by the Nevada Tax Commission under date of October 15, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$69,000.

At 12 o'clock the Board took a recess until 1:30 p. m.

October 27, 1913—1:30 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

William N. Chatfield, manager, appeared on behalf of the Pacific Power Company, and requested permission to supplement the morning hearing held with the representatives of this company, which was granted. Upon presentation of his statement, Mr. Chatfield was informed that it would be given full consideration in connection with previous testimony taken.

Hugh H. Brown, attorney, and T. A. Frazier, for the comptroller, appeared on behalf of the Esmeralda Power Company, to show cause why the assessed valuation of this company should not be increased from \$42,000 to \$160,000, in accordance with citation issued by the Nevada Tax Commission under date of October 14, 1913. The preliminary presentation of this case was made by Mr. Brown on October 18. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$42,000.

Hugh H. Brown, attorney, and T. A. Frazier, for the comptroller, appeared on behalf of the Desert Power and Mill Company, to show cause why the assessed valuation of this company should not be increased from \$175,000 to \$480,000, in accordance with citation issued by the Nevada Tax Commission under date of October 20, 1913. After a considerable hearing of the matter, an extension of time was requested in which to procure additional data, which was granted.

Hugh H. Brown, attorney, and J. A. Burgess, general superintendent, appeared on behalf of the Nevada Wonder Mining Company, to show cause why the assessed valuation of this company should not be increased from \$14,810 to \$40,000, in accordance with citation issued by the Nevada Tax Commission under date of October 15, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$25,000.

Hugh H. Brown, attorney, appeared on behalf of the Jim Butler Tonopah Mining Company, to show cause why the assessed valuation of this company should not be increased from \$14,120 to \$18,250, in accordance with citation issued by the Nevada Tax Commission under date of October 21, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$14,120.

F. G. Waterhouse, general manager, appeared on behalf of the Nevada Telephone and Telegraph Company, to show cause why the assessed valuation of this company in Nye County should not be increased from \$17,895 to \$50,000, and in Esmeralda County from \$25,000 to \$50,000, in accordance with citation issued by the Nevada Tax Commission under date of October 20, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination—Nye County, \$40,000; Esmeralda County, \$40,000.

At 4 p. m. the Board took a recess until 10 a. m., October 28, 1913.

October 28, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

There being no property owners present desiring to be heard, a recess was taken until 2 p. m.

October 28, 1913—2 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Samuel Platt, attorney, and W. A. Bradley, general manager, appeared on behalf of the Pittsburg-Silver Peak Gold Mining Company, to show cause why the valuation of this company, including their railroad, should not be increased from \$193,675 to \$680,000, in accordance with citation issued by the Nevada Tax Commission under date of October 21, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$324,000.

At 3 p. m. the Board went into executive session, the results of which appear in appended statement of decisive actions taken.

Immediately thereafter a recess was taken until such time as some property owner appeared and wished to be heard.

October 29, 1913—3 p. m.

Commissioner Colburn present.

A. J. Franck appeared on behalf of Ida Robbins and entered protest against the assessment valuation of her property in Washoe County as passed by the County Board of Equalization. After a full hearing of the matter, it was taken under advisement by Commissioner Colburn.

Finding: Petition denied.

November 1, 1913—10:30 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

H. R. Cooke, attorney, and F. A. Burnham appeared on behalf of the Water Company of Tonopah, to show cause why the assessed valuation of this company should not be increased from \$120,045 to \$225,000, in accordance with citation issued by the Nevada Tax Commission under date of October 20, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$150,000.

H. R. Cooke, attorney, appeared on behalf of the Las Gazabo Mill Company and the Round Mountain Mining Company, to show cause why the assessed valuation of the former should not be increased from \$27,000 to \$30,000, and the latter from \$15,500 to \$60,000, in accordance with citations issued by the Nevada Tax Commission under dates of October 22 and 14, respectively. After a preliminary presentation of the matter, an extension of time was requested in both cases, which was granted.

E. B. Yerington appeared before the Board on behalf of the Carson Water Company, whose case was heard and concluded on October 20, and requested permission to file an additional statement in reference thereto, which was granted. Mr. Yerington was informed this statement would be given full consideration in connection with facts brought out at the original hearing, when a final determination was made.

T. A. Frazier, for the comptroller, appeared on behalf of the Desert Power and Mill Company, whose preliminary hearing was had on October 27, and presented the final argument. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$200,000.

At 3:30 p. m. H. R. Cooke, attorney, R. H. Ernest, general superintendent, and Harry C. Mayer, secretary, appeared on behalf of the Las Gazabo Mill Company and the Round Mountain Mining Company, the preliminary presentation of both cases having been made at the morning session. After a full hearing of both matters, they were taken under advisement by the Board.

Finding: Final determination—Las Gazabo Mill Company, \$30,000; Round Mountain Mining Company, \$30,000.

November 3, 1913—10 a. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

W. A. Massey, attorney, and G. W. Hark, general manager, appeared on behalf of the Reno Traction Company, to show cause why the assessed valuation of this company should not be increased from \$35,800 to \$75,000, in accordance with citation issued by the Nevada Tax Commission under date of October 17, 1913. After a full hearing of the matter, it was taken under advisement by the Board.

Finding: Final determination, \$41,250.

November 5, 1913—2:15 p. m.

Full Board present. Meeting called to order by Chairman Shaughnessy.

Whitman Symmes, general manager, appeared on behalf of (1) the Mexican Gold and Silver Mining Company, (2) the Union Consolidated Mining Company, and (3) the Savage Gold and Silver Mining Company, to show cause why the assessed valuation of the first should not be increased from \$63,100 to \$80,000, the second from \$320 to \$1,000, and the third from \$3,200 to \$4,000, in accordance with citations issued by the Nevada Tax Commission under date of October 18, 1913. After a full hearing in all three cases, they were taken under advisement by the Board.

Finding: Final determination—Mexican Gold and Silver Mining Company, \$63,100; Union Con. Mining Company, \$1,000; Savage Gold and Silver Mining Company, \$3,200.

At 4 p. m. the Board went into executive session, the results of which appear in appended statement of decisive actions taken.

At 5:30 p. m. the Board adjourned.

For the sake of ready reference the following tabulations are inserted summarizing the specific actions taken by the Commission during its

October session as indicated by the foregoing minutes. It should be mentioned here that where figures appear in the column headed "Amount cited" they represent the Tax Commission's citations to individuals, companies, or corporations to appear and show cause why assessments should not be increased from amounts at which they were placed on the assessment roll by Assessors to amounts shown in citations. "Final determinations" were only arrived at in these instances after full hearings and thorough consideration of all arguments, or the full consideration of all data available where no personal appearance was made. Where no citations were issued and changes were made, it is due to the voluntary presentation of showings of overassessment or underassessment:

Statement Showing Action Taken by the Nevada Tax Commission, Sitting as a Final State Board of Equalization, Beginning Second Monday in October, 1913:

PUBLIC UTILITIES

Name	County	Amount assessed	Amount cited	Final determination	Increase
Water Company of Tonopah	Nye	\$120,045	\$225,000	\$150,000	\$39,955
Nevada Telephone and Telegraph Co.	Nye	17,895	50,000	40,000	22,105
	Esmeralda	25,000	50,000	40,000	15,000
Pacific Power Company	Mineral	38,200	35,000	50,000	13,800
	Churchill	19,000	30,000	25,000	6,000
Nevada-California Power Company	Nye	49,332	195,000	130,000	80,618
	Esmeralda	121,000	450,000	250,000	129,000
Reno Power, Light and Water Company	Washoe	252,630	744,500	436,000	183,370
Truckee River General Electric Co.	Washoe	143,830	480,000	300,000	156,170
	Storey	91,600		91,600	
	Lyon	120,550		120,550	
	Ormsby	16,200	42,000	35,000	18,800
	Douglas	9,469	11,000	11,000	1,541
Tonopah Sewer and Drainage Company	Nye	16,000	25,000	20,000	4,000
Virginia and Gold Hill Water Company	Washoe	99,380	198,000	99,980	
	Storey	44,223	79,200	55,000	10,777
	Ormsby	12,640	52,800	20,000	7,360
Carson Water Company	Ormsby	47,275	60,000	55,000	7,745
Bell Telephone Company of Nevada	Washoe	49,860	115,000	85,950	36,090
	Storey	5,920	15,000	7,500	1,580
	Lyon	2,730	4,000	3,500	770
	Churchill	2,590	5,000	4,500	1,910
	Humboldt		11,600	9,500	9,500
	Ormsby			1,250	1,250
Reno Traction Company	Washoe	35,800	75,000	41,250	5,450
Carson Coal Gas Company	Ormsby	12,000	18,000	12,000	
Goldfield Consolidated Water Company	Esmeralda	101,000	335,000	150,000	49,000
Totals		\$1,452,809	\$3,356,100	\$2,244,580	\$791,791

MINING AND MILLING COMPANIES
(Property Tax, Exclusive of Bullion Tax)

Name	County	Amount assessed	Amount cited	Final determination	Increase
Tonopah-Belmont, mine plant and sup.	Nye	\$108,636	\$270,184	\$133,000	\$24,364
Belmont Milling	Nye	213,345	280,000	245,000	31,655
Esmeralda Power	Nye	42,000	180,000	42,000	
Montana-Tonopah (mill)	Nye	120,000	125,000	120,000	
Round Mountain	Esmeralda	15,500	60,000	30,000	14,500
Goldfield Con. M. & T.	Esmeralda	220,200	550,000	300,000	79,800
Goldfield Con. Mines	Esmeralda	70,400	525,000	100,000	29,600
Jumbo Extension	Esmeralda	5,100	13,000	9,000	3,900
Jim Butler-Tonopah	Nye	14,120	18,250	14,120	
Las Gazabo Mill	Nye	27,000	30,000	30,000	3,000
White Caps Leasing	Nye	2,700	3,000	3,000	300
Litigation Hills Merger	Nye	800	1,000	1,000	200
Carried forward		\$839,801	\$2,015,434	\$1,027,120	\$187,919

MINING AND MILLING COMPANIES—Continued

Name	County	Amount assessed	Amount cited	Final determination	Increase
Brought forward		\$839,801	\$2,015,434	\$1,027,120	\$187,819
Manhattan-Dexter	Nye	1,475	1,700	1,700	225
Mendha-Nevada	Lincoln	3,435	3,750	3,435	
Tonopah Merger	Nye	5,700	7,000	7,000	1,300
Gypsy Queen	Nye		4,000	4,000	4,000
New Golden Crown	Nye	1,000	1,200	1,200	200
Day-Bristol Consolidated	Lincoln	10,245	12,000	10,245	
Glroux Consolidated	White Pine	121,890	140,000	121,890	
McNamara	Nye	38,440	46,900	38,440	
Desert Power and Mill	Esmeralda	175,000	490,000	200,000	25,000
Goldfield Merger	Esmeralda	7,200	24,000	15,000	7,900
Florence-Goldfield	Esmeralda	11,850	33,000	15,000	3,150
Sandstorm-Kendall	Esmeralda	1,700	2,400	2,400	700
Nevada-Douglas	Lyon	33,340	66,000	66,000	32,660
Pittsburg-Silver Peak	Esmeralda	193,675	690,000	324,000	180,325
Prince Consolidated—					
Mine plant	Lincoln	5,700	14,000	5,700	
Railroad	Lincoln	18,515	60,000	18,515	
Bullionville improvements	Lincoln	3,000	5,000	3,000	
Stores and fixtures	Lincoln	400	1,200	400	
Sierra Nevada	Storey	2,890	4,000	4,000	1,140
Savage	Storey	3,200	4,000	3,200	
Justice	Storey	6,070	7,500	6,070	
Comstock Monte Cristo	Storey	2,800	3,500	3,500	700
East Comstock Reduction	Storey	1,500	2,000	1,500	
Alta	Storey	7,000	9,000	7,000	
Chollar Leasing	Storey	1,200	2,500	1,200	
United Comstock Pumping	Storey	5,191	20,000	5,191	
Mexican	Storey	63,100	80,000	63,100	
Union Consolidated	Storey	320	1,000	1,000	680
Belcher	Storey	8,150	9,600	8,150	
Crown Point	Storey	1,500	1,800	1,500	
Yellow Jacket	Storey	48,525	58,000	48,525	
Julia Consolidated	Storey	230	350	230	
Utah	Storey	1,590	2,000	1,590	
Comstock Quartz	Storey	1,250	1,500	1,250	
Nevada Wonder	Churchill	14,810	40,000	25,000	10,190
Nevada Hills	Churchill	40,000	105,000	69,000	29,000
Umatilla	Nye	1,915	3,700	3,700	1,785
Mason Valley Mines	Lyon	229,000	378,000	238,000	9,000
Tonopah Extension Mg. Co.	Nye	95,245	100,500	100,000	4,755
Totals		\$3,007,822	\$4,419,534	\$2,457,751	\$449,929

BANKS

Name	County	Originally assessed direction Tax Commission	Final determination	Increase	Decrease
Bank of Sparks	Washoe	\$12,500	\$15,054	\$2,554	
Farmers and Merchants National	Washoe	114,000	123,500	19,500	
Schooline Banking and Trust Company	Washoe	80,000	85,500	5,500	
Washoe County Bank	Washoe	450,000	390,000		60,000
Bank of Nevada Savings and Trust Co.	Washoe	60,000	63,175	3,175	
Nixon National Bank	Washoe	650,000	690,000	40,000	
Ely National Bank	White Pine	13,435	11,480		1,955
Copper National Bank	White Pine	21,520	24,800	3,280	
First National Bank of Ely	White Pine	39,740	24,079		15,661
McGill National Bank	White Pine	10,500	14,500	4,000	
Churchill County Bank	Churchill	36,135	36,135		2
First State Bank of Las Vegas	Clark	20,000	20,000		
Douglas County Farmers Bank	Douglas	6,250	7,287	1,037	
Farmers Bank of Carson Valley	Douglas	12,500	6,750		5,750
Bank of Wells	Elko	23,900	20,000		3,900
First National Bank of Elko	Elko	51,800	43,200		8,600
Henderson Banking Corporation	Elko	100,000	80,000		20,000
John S. Cook and Company	Esmeralda	157,925	162,500	4,575	
First National Bank of Lovelock	Humboldt	35,230	35,230		
Quinn River Bank	Humboldt	9,025	8,600		425
Winnemucca State Bank and Trust Co.	Humboldt	38,470	40,000	1,530	
First National Bank of Winnemucca	Humboldt	136,280	121,980		14,320
Horton Banking and Trust Company	Lander	9,650	5,400		4,250
Carried forward		\$2,088,910	\$2,039,198	\$85,151	\$134,863

RECAPITULATION OF RAILROAD ASSESSMENT FOR 1914

Railroad	Main track mileage	All track mileage	Full cash value	Assessed 1913	Assessed 1914
Central Pacific Railway—					
Main line.....	442.95	653.54	\$35,436,000	\$19,908,081	\$21,261,597
Tecoma branch.....	4.029	4.029	60,435	29,150	36,251
Metropolis branch.....	7.85	8.82	117,750	57,322	70,650
Nev.-Cal. branch, broad-gage.....	168.89	187.06	4,916,400	2,988,468	2,949,539
Nev.-Cal. branch, narrow-gage.....	42.91	50.12	643,650	133,696	336,190
Fallon branch.....	15.90	21.18	270,300	167,980	162,180
Tonopah and Goldfield Railroad.....	96.78	112.31	2,419,500	1,162,880	1,451,700
Fernley and Lassen Railway.....	67.26	74.56	2,144,662	179,170	1,286,791
Nevada Northern Railway—					
Main line (Ely to Cobro).....	140.38	152.91	3,743,467	2,763,084	2,246,080
Mines-Smelter branch.....	24.70	34.63	1,235,000	768,318	741,000
San Pedro, Los Angeles and Salt Lake—					
Main line.....	210.12	262.15	10,506,000	4,295,696	6,303,598
Moapa branch.....	21.60	21.60	324,000	65,130	194,400
Calliente and Pioche branch.....	32.40	34.04	486,000	110,100	291,600
Tonopah and Tidewater Railroad.....	28.46	29.42	166,667	125,680	100,000
Bullfrog-Goldfield Railroad.....	80.57	88.12	416,674	295,692	250,000
Las Vegas and Tonopah Railroad.....	196.72	211.06	978,600	681,991	587,160
Virginia and Truckee Railway—					
Main line.....	51.75	67.28	1,128,150	656,929	676,880
Gardnerville branch.....	15.25	17.79	183,000	117,523	109,799
Nevada-California-Oregon Railway.....	27.02	29.06	406,300	180,610	243,120
Eureka-Nevada Railway.....	88.00	90.60	166,667	120,000	100,000
Nevada Central Railroad.....	93.00	96.00	125,000	132,515	75,000
Silver Peak Railroad.....	17.50	19.00	102,083	33,260	61,250
Atchison, Topeka and Santa Fe Ry.....	11.60	12.69	67,667	38,510	40,600
Western Pacific Railway.....	421.34	467.60	12,640,200	8,072,319	7,584,120
Nevada Copper Belt Railroad.....	41.47	44.47	622,060	458,460	373,230
Pioche-Pacific Railroad.....	15.00	17.60	29,167	12,200	17,500
Totals.....	2,357.439	2,806.389	\$79,334,379	\$43,839,604	\$47,600,621

ANALYSIS OF GENERAL RECAPITULATION SHOWN ON PRECEDING PAGE

Full cash value per mile main track.....	\$33,652.80
Full cash value per mile all track.....	28,269.74
60% of full cash value per mile main track 1914.....	20,191.68
Assessed valuation 1914 per mile all track.....	16,961.82
Assessed valuation 1913 per mile main track.....	18,406.31
Assessed valuation 1913 per mile all track.....	15,461.28
 Increase assessed valuation 1914 over 1913.....	 \$4,211,017.00
Percentage increase 1914 over 1913.....	9.71%
 Increase assessed valuation creditable to efforts of Nevada Tax Commission including increase brought about by horizontal raises made in various counties in 1913.....	 \$6,475,979.00
Percentage increase on basis last above.....	15.71%

NOTE—In above assessment valuations for 1913 is included a 10% horizontal increase made by the Nevada Tax Commission in Elko, Humboldt, and White Pine Counties.

Be It Further Resolved (as provided in section 5 of said Act), That the said unit valuations be apportioned to the various counties in the proportion that the total track mileage within each county bears to the aggregate track mileage of the railway companies within the State, and that thereafter the valuation thus apportioned to the counties be further apportioned, as provided in said section 5, to the municipalities or towns in the proportion that the said total track mileage within each municipality or town bears to the aggregate track mileage within each of said counties.

NEVADA TAX COMMISSION,
J. F. SHAUGHNESSY, *Chairman*,
EMMET D. BOYLE, *Commissioner*,
C. H. COLBURN, *Commissioner*.

Attest: L. F. ADAMSON, *Secretary*.

1914, having been held and continued from day to day, and all parties interested having been heard or afforded full opportunity to be heard, either in person or by their agents or attorneys, as provided in section 3, chapter 134, Nevada Laws, 1913; and the Nevada Tax Commission having fully considered every element, and fairly weighed all evidence placed before it by which assessment valuations shall be established by the said Commission on the several kinds and classes of property mentioned in section 5 of said Act; therefore, be it

Resolved, That the following valuations within Nevada, including all elements named in section 5 of said Act, are hereby found for the several public utility companies enumerated herein, for assessment and taxation purposes for the State, counties, municipalities, and towns, for the year 1914:

ELECTRIC COMPANIES

Name of Company	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Consolidated Power and Telephone Company (Power Department) ..	Clark	\$21,997	\$4,551	\$13,198	\$8,647	190		
Douglas Milling and Power Company	Douglas	16,961	8,708	10,176	1,468	17		
Ely Light and Power Company (Old Plant)	White Pine	58,000	29,695	34,800	5,105	17		
Ely Light and Power Company (New Plant—nonoperative) ..	White Pine	\$20,000		12,000	12,000			
Elko-Lamoille Power Company	Elko	125,000	12,400	75,000	62,600	605		
Las Vegas Land and Water Company (Electrical Department) ..	Clark	1,910	432	1,146	714	165		
Mason Water, Light and Power Company (Electrical Department) ..	Lyon	4,072	1,245	2,443	1,198	96		
Pacific Power Company	Churchill	\$75,000	\$25,000	\$45,000	\$20,000	80		
	Mineral	177,000	50,000	106,200	56,200	112		
Totals—Pacific Power		\$252,000	\$75,000	\$151,200	\$76,200	102		
Reno Power, Light and Water Company (Electrical Department) ..	Washoe	\$597,361	\$166,140	\$340,416	\$174,276	105		
Nevada-California Power Company	Nye	\$547,815	\$130,000	\$328,689	\$198,689	153		
	Esmeralda	945,000	250,000	567,000	\$17,000	127		
Totals—Nevada-California Power		\$1,492,815	\$380,000	\$895,689	\$515,689	136		
S. R. Young Electric Plant	Humboldt	\$43,703		\$26,222	\$26,222			
Truckee River General Electric Company	Washoe	\$951,000	\$300,000	\$576,600	\$276,600	92	\$18,180	20
	Storey	122,968	91,600	73,450			18,373	15
	Lyon	170,236	120,560	102,177				
	Ormsby	61,886	35,000	36,802	1,802	5		
	Douglas	24,223	11,000	14,534	3,534	32		
Totals—Truckee River		\$1,339,222	\$558,150	\$803,533	\$231,986	44	\$36,553	
Winnemucca Water and Light Company (Electrical Department) ..	Humboldt	\$60,000	\$19,191	\$36,000	\$16,809	87		
Southern Pacific Company (Carlin Electric Plant). Included in collective unit assessment valuation placed against Central Pacific Company.								
Stepitoe Valley Smelting and Mining Company (Electrical Department). Included in assessment of Steptoe Valley Smelting and Mining Company as a milling facility.								
Totals for electric companies		\$4,003,041	\$1,255,512	\$2,401,823	\$1,182,864	91	\$36,553	

a Invoice valuation.

GAS COMPANIES

Name of Company	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Nevada Gas Company	Nye	\$18,667	\$10,655	\$10,000	---	---	\$655	6
Carson City Coal Gas Company	Ormsby	28,000	12,000	16,000	\$3,000	25	---	---
Reno Power, Light and Water Company (Gas Department)	Washoe	166,000	49,196	100,800	51,605	106	---	---
Totals for gas companies		\$210,667	\$71,850	\$126,800	\$54,605	75	\$655	---

WATER COMPANIES

Name of Company	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Austin Water Company	Lander	\$25,000	\$5,750	\$15,000	\$9,250	161	---	---
Carson Water Company	Ormsby	100,000	55,000	60,000	5,000	9	---	---
Elko Water and Light Company (Water Department)	Elko	100,000	21,423	60,000	38,577	180	---	---
Ely Water Company	White Pine	100,000	35,513	60,000	24,487	69	---	---
Eureka Water Company	Eureka	20,000	11,900	12,000	100	1	---	---
Hawthorne Water Company	Mineral	10,000	3,000	6,000	3,000	100	---	---
Indian Springs Water Company	Nye	10,000	1,500	6,000	4,500	300	---	---
Las Vegas Land and Water Company (Water Department)	Clark	17,703	8,333	10,621	2,288	138	---	---
Manhattan Water Company	Nye	8,333	3,000	5,000	2,000	67	---	---
Mason Water, Light and Power Company (Water Department)	Lyon	14,450	2,975	8,670	5,695	191	\$3,000	75
Ruby Hill Water Works	Eureka	1,667	4,000	1,000	---	---	---	---
Emeralda Water and Milling Company	Emeralda	16,667	6,675	10,000	3,325	50	---	---
Goldfield Consolidated Water Company	Emeralda	250,000	150,000	150,000	---	---	---	---
Tonopah Sewer and Drainage Company	Nye	45,000	20,000	27,000	7,000	35	---	---
Water Company of Tonopah	Nye	\$50,000	150,000	210,000	60,000	40	---	---
Wonder Water Company	Churchill	\$10,000	4,500	6,000	1,500	33	---	---
Virginia Ranch Land and Water Company (Water Department)	Douglas	10,000	---	6,000	---	---	---	---
Reno Power, Light and Water Company (Water Department)	Washoe	768,569	220,665	452,141	231,476	105	---	---
Totals for water companies		\$1,842,389	\$699,469	\$1,105,432	\$408,963	53	\$3,000	---

*Invoice valuation.

TRACTION COMPANIES

Name of Company	Mileage	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Reno Traction Company.....		Washoe	\$125,000	\$41,250	\$75,000	\$33,750	82		
Nevada Interurban Railway Company.....		Washoe	\$16,667	8,500	10,000	1,500	18		
Totals for traction companies			\$141,667	\$49,750	\$85,000	\$35,250	71		

*Invoice valuation.

TELEPHONE AND TELEGRAPH COMPANIES

Bell Telephone Company (Assessed per wire mile 1913, \$36.77) (Assessed per wire mile 1914, \$62.30)	136.60 180.00 62.00 24.00 236.50 2,411.90	Churchill Humboldt Lyon Ormsby Storey Washoe	\$14,178 18,682 6,435 2,491 24,556 250,429	\$4,500 9,500 3,500 1,250 7,500 85,950	\$6,510 11,213 3,962 1,495 14,733 150,249	\$4,010 1,713 362 245 7,233 64,299	89 18 10 19 95 76		
Totals	3,051.00		\$316,771	\$112,200	\$190,062	\$77,862	69		
Bridgeport Telephone and Telegraph Company	44.00 26.00 26.00	Mineral Lyon Douglas	\$2,292 1,354 1,354	----- \$450 -----	\$1,374 813 813	\$1,374 363 813	81		
Totals	96.00		\$6,000	\$450	\$3,000	\$2,550	567		
California and Oregon Telegraph Company.....		Washoe	\$2,000	\$1,050	\$1,200	\$150	14		
Consolidated Power and Telephone Co. (Tel. Dept.)		Clark	2,000	249	1,200	951	382		
Elko Telegraph and Telephone Company		Elko	65,000	21,816	39,000	17,184	79		
Nevada Northern Telegraph Line.....	74.402 82.00	Elko White Pine	\$6,146 6,771	\$742 820	\$3,568 3,952	\$2,828 3,112	390 390		
Totals	166.402		\$912,917	\$1,562	\$7,500	\$6,988	390		
Northern Nevada Telephone Company		Elko	\$8,000	\$3,710	\$4,800	\$1,090	29		
Nevada Telegraph and Telephone Company		Emeralda Nye	\$98,666 66,667	\$40,000 40,000	\$40,000 40,000				
Totals			\$133,333	\$80,000	\$80,000				
Searchlight and Western Telephone Company.....		Clark	\$46,000	\$1,490	\$8,000	\$1,510	101		
United Farmers Telephone and Telegraph Company		Douglas	10,000	2,500	6,000	2,500	25		
White Pine Telephone Company		White Pine	75,000	8,363	45,000	36,686	442		

Yerington Electric Company (Telephone Department)		Lyon		5,000	2,000	3,000	1,000	50
Golconda Telephone and Power Company		Humboldt		\$40,088	\$9,966	\$24,083	\$14,087	141
		Elko		19,912	4,960	11,947	6,997	141
Totals								141
Austin-Manhattan Telephone Company		Lander		\$80,000	\$14,916	\$36,000	\$21,084	141
		Nye		\$2,062	\$1,237	\$1,237		3
Totals				\$3,438	2,000	2,063	\$63	3
Mason Valley Telephone and Telegraph Co. (New Line).		Lyon		\$5,500	\$3,300	\$3,300		64
Nevada Consolidated Telephone and Telegraph Company		Ormsby		\$9,000		\$5,400	\$5,400	64
				16,400	6,000	9,840	3,840	
Western Union Telegraph Company		Churchill		\$37,866	\$20,900	\$34,720	\$13,820	66
		Douglas		1,141	464	684		47
		Elko		294,637	89,250	134,732	45,532	51
		Eureka		63,312	22,361	37,964	15,123	66
		Humboldt		226,192	89,968	135,716	45,848	51
		Lander		50,179	19,020	30,108	11,068	58
		Lyon		60,068	17,764	30,024	12,260	69
		Mineral		46,948		27,570	27,570	66
		Ormsby		7,626	2,765	4,575	1,819	77
		Storey		14,396	4,884	8,632	3,748	77
		Washoe		102,627	34,750	61,576	26,826	77
		Esmeralda		50,609	18,279	30,366	12,087	66
		Nye		63,072	22,906	37,844	15,088	66
		Clark		96,512	38,499	57,806	18,807	49
		Lincoln		73,398	30,362	44,039	13,677	45
Totals				\$1,126,543	\$412,468	\$676,926	\$293,468	64
Postal Telegraph Cable Company		Churchill		\$20,415	\$7,990	\$12,249	\$4,299	53
		Lyon		6,172	2,412	3,703	1,291	53
		Humboldt		78,606	30,723	47,163	16,440	53
		Elko		82,347	32,186	49,408	17,222	53
		Washoe		23,818	9,310	14,291	5,381	53
		Eureka		17,013	6,660	10,208	3,558	53
Totals				\$228,370	\$89,281	\$137,022	\$47,761	53
Totals for telephone and telegraph companies				\$2,086,884	\$762,123	\$1,251,250	\$498,190	64

^aInvoice valuations.

^bOperated partly as railroad facility and partly as commercial enterprise. One-half value is considered in collective unit value of railroad. These figures represent the remaining one-half value creditable to commercial business.

EXPRESS COMPANIES

Name of Company	Mileage	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Wells, Fargo & Co. (Assessed per mile operated 1913, \$301.24) (Assessed per mile operated 1914, \$300.00)	152.93 16.66 89.77 67.30 140.16 121.49 122.63 227.581 133.88 86.10 120.46 17.34 11.20 11.60 90.028	Washoe Storey Lyon Churchill Humboldt Lander Eureka Elko Mineral Nye Ormsby Douglas Clark White Pine	\$76,465 8,380 44,886 33,660 70,080 60,745 51,315 113,786 68,940 43,060 60,280 8,670 2,600 2,800 45,013	\$94,531 18,327 124,518 26,961 63,835 42,048 116,415 112,668 294,925 127,186 23,860 114,327 16,473 11,020 70,240	\$45,879 4,998 26,931 20,191 36,447 36,789 68,277 40,164 23,860 36,138 8,202 3,360 3,480 27,007			\$38,652 10,829 97,587 43,744 78,968 78,909 186,648 87,062 78,289 11,271 7,540 46,288	46 68 78 69 68 67 67 68 68 68 68 64 63 17 17 17 1 23 23 23 23
Totals	1,419.187		\$709,568	\$1,137,073	\$425,741	\$3,360		\$714,692	
American Express Company (Assessed per mile operated 1913, \$75.40) (Assessed per mile operated 1914, \$76.00)	181.16 135.35 138.08 5.90	Clark Lincoln Nye Esmeralda	\$22,645 15,919 17,354 17,662	\$9,682 12,182 12,447 477	\$13,592 10,155 10,385 388	\$3,940	41	\$2,027 2,062 79	
Totals	459.84		\$57,480	\$34,758	\$34,500	\$3,940		\$4,108	
Globe Express Company	62.61 139.81 25.03 33.08 160.81	Washoe Humboldt Lander Eureka Elko	\$5,217 11,650 2,084 2,759 13,400	\$4,089 9,039 1,639 2,113 1,045	\$3,131 6,990 1,292 1,454 8,040			\$988 2,073 387 499	
Totals	421.34		\$35,112	\$17,969	\$21,067	\$6,996	17	\$3,897	
Totals for express companies			\$802,160	\$1,189,800	\$481,308	\$14,295		\$722,787	64

SLEEPING-CAR COMPANIES

Name of Company	Mileage	County	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease
Pullman Company (Assessed per mile operated 1913, \$316.04) (Assessed per mile operated 1914, \$352.94)	53.06 107.36 306.63 104.04 67.76 279.57 53.69 102.96 66.06 90.06 90.15 10.37 97.95	Churchill Clark Elko Esmeralda Eureka Humboldt Lander Lincoln Lyon Mineral Nye Storey Washoe	\$31,153 63,335 179,511 61,097 39,782 164,178 31,470 90,457 32,921 52,851 52,840 6,069 57,509	\$15,915 32,175 112,935 80,579 20,323 83,960 16,077 90,855 16,313 27,221 23,705 3,096 29,337	\$18,682 38,000 107,705 36,668 23,850 98,606 18,852 36,274 19,782 31,723 31,764 3,653 34,506	\$2,777 6,825 5,779 3,652 14,536 2,836 5,389 2,904 4,437 3,059 5,967 5,169	17 18 19 17 17 17 17 17 17 10 16 18	\$5,230	5
Totals for sleeping-car companies.....	1,419.06		\$383,333	\$443,471	\$500,000	\$56,769	11	\$5,230	

RECAPITULATION BY CLASSES

Class of Companies	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease	Net increase
Electric companies.....	\$4,008,041	\$1,255,512	\$2,401,823	\$1,182,864	91	\$36,553		
Gas companies.....	210,667	71,850	125,900	54,606	76	655		
Water companies.....	1,842,389	699,469	1,105,432	408,963	53	8,000		
Telephone and telegraph companies.....	2,065,834	762,123	1,251,250	489,180	64	63		
Traction companies.....	141,667	49,760	85,000	35,250	71			
Express companies.....	802,160	1,139,900	481,308	14,256		722,787	64	
Sleeping-car companies.....	833,333	448,471	500,000	56,769	11	5,230		
Totals.....	\$9,919,091	\$4,476,975	\$5,960,613	\$2,241,926	33	\$768,238		\$1,473,688

RECAPITULATION BY COUNTIES

Counties, and names of companies	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease	Net increase	Net decrease
<i>Churchill County</i> —									
Pacific Power Company	\$715,000	\$25,000	\$45,000	\$20,000	80				
Wonder Water Company	10,000	4,500	6,500	2,000	33				
Bell Telephone Company	14,178	4,500	8,510	4,010	89				
Western Union Telegraph Company	57,586	20,900	24,720	3,820	66				
Postal Telegraph Cable Company	20,415	7,980	12,249	4,269	53	\$43,744	69		
Wells, Fargo & Co.	33,455	63,985	20,191						
Pullman Company	31,153	15,915	15,662	2,777	17				
Totals—Churchill County	\$242,262	\$142,730	\$145,562	\$45,376	6	\$43,744		\$2,632	
<i>Clark County</i> —									
Consolidated Power and Tel. Co. (Power Department)	\$21,997	\$4,551	\$13,198	\$8,647	190				
Las Vegas Land and Water Co. (Electric Department)	1,910	4,432	1,146	714	165				
Las Vegas Land and Water Co. (Water Department)	17,703	3,568	10,821	7,053	196				
Consolidated Power and Tel. Co. (Telephone Dept.)	2,000	249	1,300	951	382				
Searchlight and Western Telephone Company	5,000	1,490	3,000	1,510	101				
Western Union Telegraph Company	95,512	38,499	67,308	18,807	49	\$7,540	68		
Wells, Fargo & Co.	5,800	11,020	3,480						
American Express Company	22,645	9,652	13,469	3,840	41				
Pullman Company	63,335	32,175	38,000	5,825	18				
Totals—Clark County	\$235,902	\$101,636	\$141,548	\$47,447	39	\$7,540		\$9,907	
<i>Douglas County</i> —									
Douglas Milling and Power Company	\$15,961	\$3,708	\$10,176	\$1,468	17				
Truckee River General Electric Company	24,223	11,000	14,534	3,534	32				
Virginia Ranch Land and Water Co. (Water Dept.)	10,000		6,000	6,000					
Bridgeport Telephone and Telegraph Company	1,854		813	813					
United Farmers Telephone and Telegraph Company	10,000	3,351	6,000	2,649	79				
Western Union Telegraph Company	1,141	464	684	230	47				
Wells, Fargo & Co.	5,600		3,360	3,360					
Totals—Douglas County	\$69,279	\$23,523	\$41,567	\$18,044	77			18,044	
<i>Elko County</i> —									
Elko-Lamoille Power Company	\$125,000	\$12,400	\$75,000	\$62,600	505				
Elko Water and Light Company	100,000	21,423	60,000	38,577	180				
Elko Telegraph and Telephone Company	65,000	21,816	38,000	17,184	79				
Nevada Northern Telegraph Line	6,146	742	3,568	2,826	380				
Northern Nevada Telephone Company	8,000	3,710	4,800	1,090	29				
Golconda Telephone and Power Company	19,912	4,950	11,947	6,997	141				
Western Union Telegraph Company	224,637	89,250	134,782	45,532	51				
Postal Telegraph Cable Company	82,347	32,186	49,408	17,222	53				
Wells, Fargo & Co.	113,795	204,925	66,277						
Globe Express Company	18,400	1,045	8,040						
Pullman Company	179,511	112,985	107,705	6,995	699	\$136,648	67		
Totals—Elko County	\$967,748	\$505,362	\$565,877	\$199,023	11	\$141,878		\$7,148	

RECAPITULATION BY COUNTIES—Continued

Counties, and names of companies	Full cash value	Assessed 1913	Assessed 1914	Increase 1914	Per cent increase	Decrease 1914	Per cent decrease	Net increase	Net decrease
<i>Lyon County—</i>									
Mason Water, Light and Power Co. (Electric Dept.)	\$4,072	\$1,245	\$2,443	\$1,198	96	\$18,373	15		
Truckee River General Electric Company	170,286	120,550	102,177	18,373	191				
Mason Water, Light and Power Co. (Water Dept.)	14,439	3,570	8,477	4,907	137				
Beil Telephone Company	1,435	3,570	3,570	3,570	250				
Bridgeport Telephone and Telegraph Company	1,354	2,000	3,813	3,813	281				
Yerington Electric Company (Telephone Department)	5,004	5,000	3,000	3,000	60				
Mason Valley Telephone and Telegraph Co. (New Line)	9,000	5,400	5,400	1,000	50				
Western Union Telegraph Company	50,088	30,024	30,024	12,360	69				
Postal Telegraph Cable Company	6,172	2,412	3,703	1,291	53	97,587	78		
Wells, Fargo & Co.	44,885	124,518	28,931	2,934	17				
Pullman Company	32,921	16,318	19,782	2,934	17				
Totals—Lyon County	\$344,622	\$292,232	\$206,775	\$30,508	29	\$115,960			\$85,457
<i>Mineral County—</i>									
Pacific Power Company	\$177,000	\$50,000	\$108,200	\$58,200	112				
Haythorne Water Company	10,000	3,000	6,000	3,000	100				
Bridgeport Telephone and Telegraph Company	2,292	1,874	1,874	1,874	100				
Western Union Telegraph Company	45,948	27,570	27,570	27,570	63	\$87,022			
Wells, Fargo & Co.	66,940	40,164	40,164	4,437	17				
Pullman Company	52,881	27,294	31,728	4,437	17				
Totals—Mineral County	\$355,061	\$207,477	\$213,086	\$38,581	3	\$87,022		\$5,559	
<i>Nye County—</i>									
Nevada-California Power Company	\$547,815	\$130,000	\$323,689	\$198,689	153				
Nevada Gas Company	16,687	10,655	10,000	4,500	300	\$655	6		
Indian Springs Water Company	10,000	1,500	6,000	2,000	67				
Manhattan Water Company	8,383	3,000	5,000	7,000	35				
Tonopah Sewer and Drainage Company	45,000	20,000	27,000	60,000	40				
Water Company of Tonopah	350,000	150,000	210,000	68	3				
Nevada Telephone and Telegraph Company	66,687	40,000	40,000	15,088	66				
Austin-Manhattan Telephone Company	3,433	2,063	3,744	3,009	10				
Western Union Telegraph Company	63,072	22,806	37,844	3,009	10	2,092	17		
Wells, Fargo & Co.	48,050	28,380	28,380	3,009	10				
American Express Company	17,264	12,447	10,355	3,009	10				
Pullman Company	52,940	28,755	31,764	3,009	10				
Totals—Nye County	\$1,229,286	\$449,993	\$737,545	\$290,299	64	\$2,747		287,532	
<i>Ormsby County—</i>									
Truckee River General Electric Company	\$61,336	\$35,000	\$36,802	\$1,802	5				
Carson City Coal Gas Company	28,000	12,000	15,000	3,000	25				
Carson Water Company	100,000	65,000	60,000	5,000	9				
Beil Telephone Company	2,491	1,250	1,495	245	19				
Nevada Consolidated Telephone and Telegraph Co.	15,400	6,000	9,840	3,840	64				
Western Union Telegraph Company	7,626	2,756	4,878	1,819	66	\$11,271	68		
Wells, Fargo & Co.	8,670	16,475	5,202	5,202	3				
Totals—Ormsby County	\$222,626	\$128,479	\$132,914	\$18,704	3	\$11,271		4,406	

Storey County-----

Truckee River General Electric Company
Bell Telephone Company
Western Union Telegraph Company
Pullman Company
Wells, Fargo & Co.

\$122,988
7,500
14,733
4,884
8,089
8,330

\$91,600
7,500
14,733
4,884
8,089
15,827

\$79,490
14,733
8,032
3,653
4,998

\$7,233
8,748
5,687

98
77
15

\$18,180

20

Totals—Storey County-----

Washoe County-----

Reno Power, Light and Water Co. (Electric Dept.)
Truckee River General Electric Company
Reno Power, Light and Water Co. (Gas Department)
Reno Power, Light and Water Co. (Water Department)
Reno Traction Company
Nevada Interurban Railway Company
Bell Telephone Company
California and Oregon Telegraph Company
Western Union Telegraph Company
Postal Telegraph Cable Company
Wells, Fargo & Co.
Globe Express Company
Pullman Company

\$175,729
\$557,351
951,000
168,000
753,589
125,000
16,867
250,429
2,000
102,827
23,818
76,465
5,217
57,509

\$122,907
\$165,140
300,100
49,135
220,665
41,250
8,500
85,950
1,050
34,750
9,310
84,531
4,069
29,337

\$105,435
\$340,415
576,600
100,900
482,141
75,000
10,000
150,249
1,200
61,575
14,291
45,879
3,131
34,545

\$11,538
\$174,276
\$76,600
51,605
231,476
33,750
1,500
64,299
26,526
4,951

105
92
105
105
92
18
76
14
77
53

\$38,652
938

46
23

Totals—Washoe County-----

White Pine County-----

Ely Light and Power Company (Old Plant)
Ely Light and Power Company (New Plant)
Ely Water Company
Nevada Northern Telegraph Line
White Pine Telephone Company
Wells, Fargo & Co.

\$3,109,662
\$58,000
20,000
100,000
6,771
75,000
45,013

\$1,084,747
\$29,695
35,513
580
8,305
75,240

\$1,955,789
\$34,900
12,000
60,000
3,932
45,000
27,007

\$570,632
\$5,105
12,000
24,487
3,112
36,695

83
17
69
390
442

\$48,233

64

Totals—White Pine County-----

Grand totals-----

Less net decrease

Total net increase

\$9,919,091

\$4,476,975

\$5,950,613

\$2,241,926

33

\$768,288

\$1,689,916
216,278

\$1,473,638

'Signed) NEVADA TAX COMMISSION:

J. F. SHAUGHNESSY, Chairman,
EMMET D. BOYLE, Commissioner,
C. H. COLBURN, Commissioner.

A. DAMSON, Secretary.

LICENSES

The method for the reporting of license collections varied somewhat in different counties throughout the State.

The necessary forms for making application for licenses, together with a uniform method of reporting the collections, as provided by the statutes, were adopted and installed in all the counties. Under the present system there is a great saving in time and expense in keeping this branch of the revenue system correctly checked.

Following is detailed statement of license collections by counties and for the State as a whole, for quarters under classifications, during the year 1913, with same classification totals for year 1912, showing percentages of increase or decrease. It should be borne in mind that state liquor and sheep-grazing licenses are yearly, while all others are quarterly:

Churchill County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$172.50	\$154.70	\$157.50	\$157.50	\$672.20	\$737.50	-----	17
Merchandise	\$41.25	473.73	392.50	547.50	1,759.98	1,417.50	24	-----
Amusements and billiards	155.00	146.21	81.66	70.00	452.87	250.00	81	-----
Miscellaneous	156.00	205.56	171.00	182.50	695.06	709.00	-----	2
County liquor	705.00	728.08	767.50	755.00	3,015.58	3,360.00	-----	11
State liquor	\$1,599.75	\$1,711.28	\$1,570.16	\$1,722.50	\$6,593.69	\$6,524.00	1	-----
Sheep-grazing	1,574.00	37.50	125.00	37.50	1,774.00	1,861.00	-----	5
Totals	\$3,963.75	\$1,743.78	\$1,695.16	\$1,760.00	\$8,567.69	\$8,455.50	100	-----

Clark County

Hotels, restaurants, and lodging-houses	\$222.50	\$193.75	\$223.75	\$232.50	\$917.50	\$1,042.50	-----	13
Merchandise	322.50	357.50	623.75	530.00	1,768.75	1,500.00	13	-----
Amusements and billiards	185.00	116.00	181.67	90.00	471.67	455.00	-----	1
Miscellaneous	113.50	153.50	94.00	136.00	532.00	486.50	7	-----
County liquor	780.00	540.00	765.00	700.00	2,775.00	3,240.00	-----	17
State liquor	\$1,563.50	\$1,419.75	\$1,793.17	\$1,638.50	\$6,464.22	\$6,764.00	-----	5
Sheep-grazing	1,062.00	37.50	-----	25.00	1,124.50	1,787.50	-----	4
Totals	\$3,290.50	\$1,457.25	\$1,793.17	\$1,713.50	\$8,139.42	\$8,551.50	-----	-----

Douglas County

Hotels, restaurants, and lodging-houses	\$97.50	\$108.25	\$95.00	\$108.75	\$407.50	\$407.25	82	-----
Merchandise	135.00	143.75	390.00	467.50	1,076.25	591.25	-----	112
Amusements and billiards	30.00	25.00	15.00	50.00	90.00	170.00	-----	14
Miscellaneous	157.00	182.00	194.50	187.00	760.50	645.50	-----	5
County liquor	445.00	572.50	450.00	490.00	1,977.50	2,080.00	-----	-----
State liquor	\$904.50	\$1,039.50	\$1,084.50	\$1,273.25	\$4,301.75	\$3,914.00	10	-----
Sheep-grazing	962.00	-----	25.00	-----	987.00	999.00	-----	4
Totals	\$1,866.50	\$1,139.50	\$1,109.50	\$1,273.25	\$5,388.75	\$4,913.00	100	-----

Elko County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1918	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$240.00	\$498.47	\$337.85	\$405.00	\$1,401.32	\$750.00	100	
Merchandise	900.00	1,703.21	993.00	1,470.15	5,066.36	3,438.75	48	
Amusements and billiards	280.00	317.36	180.85	338.85	1,096.86	885.00	23	
Miscellaneous	207.00	317.33	369.50	232.00	1,175.83	878.00	45	
County liquor	2,520.00	4,575.11	2,807.85	3,337.50	13,240.46	10,470.00	26	
State liquor	\$4,127.00	\$7,401.48	\$4,619.06	\$5,833.00	\$21,980.53	\$16,431.75	34	7 1/2
Sheep-grazing	5,150.00	497.50	3,000.00	3,900.00	12,069.00	7,005.00	72	
Totals	\$14,436.00	\$7,898.98	\$7,919.06	\$9,896.50	\$40,139.53	\$29,994.75		

Esmeralda County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1918	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$165.00	\$183.75	\$141.25	\$172.50	\$662.50	\$600.00	5	
Merchandise	834.50	822.50	1,062.50	1,064.25	3,743.75	3,557.50	900	
Amusements and billiards	125.00	645.00	1,135.00	1,242.00	3,047.00	310.00		133
Miscellaneous	232.50	236.00	191.00	241.00	1,099.50	2,350.00		12
County liquor	1,540.00	1,575.00	1,355.00	1,225.00	5,695.00	6,370.00		
State liquor	\$2,947.00	\$3,421.25	\$3,874.75	\$3,914.75	\$14,157.75	\$13,187.50	7	
Sheep-grazing	3,810.00	537.00	125.00	75.00	4,547.00	4,546.50		
Totals	\$8,757.00	\$3,958.25	\$3,999.75	\$3,999.75	\$18,704.75	\$17,734.00		

Eureka County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1918	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$75.00	\$53.82	\$75.00	\$75.00	\$278.82	\$277.50	2	
Merchandise	213.75	204.52	439.32	400.00	1,259.59	870.00	45	
Amusements and billiards	5.00	19.00	20.00	70.00	114.00	97.50	17	
Miscellaneous	7.50	49.58	35.00	40.00	132.08	45.00	158	
County liquor	795.00	509.34	828.70	740.00	2,873.04	3,240.00		13
State liquor	\$1,095.25	\$843.26	\$1,395.02	\$1,325.00	\$4,660.53	\$4,530.00	3	
Sheep-grazing	1,500.00	112.50	50.00	12.50	1,675.00	1,624.50	3	
Totals	\$2,771.25	\$955.76	\$1,445.02	\$1,439.50	\$6,612.53	\$6,154.50	100	

Humboldt County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$332.50	\$462.00	\$307.50	\$327.45	\$1,539.45	\$1,232.50	28	
Merchandise	642.50	1,138.25	1,111.25	904.20	3,846.20	2,635.00	47	
Amusements and billiards	1,100.00	686.00	166.00	72.66	2,022.66	440.00	360	
Miscellaneous	322.50	322.50	322.50	201.50	1,198.50	847.50	33	
County liquor	3,965.00	3,370.00	3,645.00	2,399.75	13,579.75	10,415.00	30	
State liquor	\$6,510.00	\$6,227.75	\$5,551.25	\$3,575.55	\$22,174.55	\$15,590.00	42	
Sheep-grazing	8,912.00	650.00	350.00	100.00	10,012.00	7,245.50	38	
Totals	\$15,722.00	\$7,302.75	\$8,061.25	\$4,175.55	\$35,261.55	\$26,573.50		22

Lander County

Hotels, restaurants, and lodging-houses	\$105.00	\$55.00	\$77.50	\$80.00	\$327.50	\$387.50		12
Merchandise	175.00	166.95	323.66	330.45	1,000.06	685.00	46	
Amusements and billiards	62.00	33.25	45.00	50.00	180.25	145.00	24	
Miscellaneous	169.50	120.05	174.50	187.00	651.05	588.00	7	
County liquor	600.00	\$32.20	555.00	835.00	2,072.20	3,045.00		47
State liquor	\$1,101.50	\$756.45	\$1,180.65	\$1,172.45	\$4,211.05	\$4,830.50		15
Sheep-grazing	1,762.00	75.00	25.00	12.50	1,874.50	1,924.50		3
Totals	\$2,863.50	\$331.45	\$1,205.65	\$1,134.95	\$6,085.55	\$6,755.00		

Lincoln County

Hotels, restaurants, and lodging-houses	\$127.50	\$165.00	\$156.25	\$72.50	\$521.25	\$457.50	1	
Merchandise	226.25	337.60	340.00	145.75	1,062.50	680.00	61	
Amusements and billiards	50.00	50.00	50.00	31.70	181.70	160.00	14	
Miscellaneous	102.00	147.00	132.00	123.00	604.00	408.00	34	
County liquor	720.00	660.00	610.00	540.00	2,530.00	3,150.00		25
State liquor	\$1,235.75	\$1,359.50	\$1,298.25	\$915.95	\$4,799.45	\$4,865.50		1
Sheep-grazing	1,724.00	947.00	473.25	50.00	1,774.00	1,932.00		11
Totals	\$3,159.75	\$2,305.50	\$1,706.50	\$395.95	\$6,196.70	\$7,432.50		

Lyon County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Percent increase	Percent decrease
Hotels, restaurants, and lodging-houses	\$258.50	\$257.50	\$247.50	\$237.50	\$1,051.00	\$767.50	37	
Merchandise	281.25	333.75	735.50	607.50	1,958.00	1,615.00	21	
Amusements and billiards	5.00	5.00	295.00		900.00	45.00	567	
Miscellaneous	219.50	179.50	212.00	284.50	896.50	670.50	34	
County liquor	1,235.00	1,240.00	1,210.00	1,130.00	4,815.00	4,745.00	2	
State liquor	\$1,984.25	\$2,015.75	\$2,700.00	\$2,309.50	\$9,019.50	\$7,843.00	15	
Sheep-grazing	2,696.00	150.00	200.00	50.00	3,096.00	2,861.00	8	
Totals	\$4,680.25	\$2,165.75	\$3,450.00	\$2,359.50	\$12,655.50	\$10,704.00	100	

Mineral County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Percent increase	Percent decrease
Hotels, restaurants, and lodging-houses	\$45.00	\$55.00	\$37.50	\$75.00	\$252.50	\$270.00	82	
Merchandise	161.25	223.75	360.00	356.75	1,101.25	603.75	139	
Amusements and billiards	15.00	60.00	50.00	50.00	175.00	65.00	100	
Miscellaneous	560.00	750.00	53.50	85.00	1,448.50	152.50	100	
County liquor			780.00	875.00	2,965.00	2,390.00	24	
State liquor	\$731.25	\$1,103.75	\$1,330.00	\$1,441.25	\$4,606.25	\$3,323.75	39	
Sheep-grazing	1,250.00	\$25.00	125.00	50.00	1,450.00	1,362.50	5	
Totals	\$2,031.25	\$1,428.75	\$1,557.00	\$1,491.25	\$6,508.25	\$4,991.25	100	

Nye County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Percent increase	Percent decrease
Hotels, restaurants, and lodging-houses	\$146.25	\$223.75	\$210.00	\$223.80	\$806.80	\$733.75	9	
Merchandise	795.75	896.25	858.75	990.30	3,484.05	3,594.25	682	
Amusements and billiards	1,055.00	1,080.00	655.00	1,416.20	4,186.20	535.00	1	
Miscellaneous	190.00	\$12.50	347.50	218.39	1,068.39	3,012.50	11	
County liquor	1,905.00	2,095.00	2,010.00	2,029.74	7,969.74	7,890.00	100	
State liquor	\$4,095.00	\$4,622.50	\$4,081.25	\$4,818.43	\$17,517.18	\$15,772.50	11	
Sheep-grazing	4,336.00	299.50	175.00	199.75	5,010.25	5,023.00	100	
Totals	\$9,431.00	\$6,297.00	\$4,406.25	\$6,018.18	\$25,152.43	\$30,795.50		

Ormsby County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants and lodging-houses	\$32.50	\$80.00	\$67.50	\$75.00	\$255.00	\$307.50	22	8
Merchandise	341.25	420.80	595.25	601.25	1,958.55	1,622.50	114	
Amusements and billiards	96.00	135.00	113.35	20.00	364.35	170.00	9	
Miscellaneous	128.50	99.30	98.00	98.00	423.80	386.50	9	
County liquor	615.00	567.50	572.50	610.00	2,365.00	2,625.00		11
State liquor	\$1,282.25	\$1,282.60	\$1,440.10	\$1,302.25	\$5,287.20	\$5,011.00	6	3
Sheep-grazing	1,624.00	None	None	None	1,624.00	1,674.00		
Totals	\$2,886.25	\$1,282.60	\$1,440.10	\$1,302.25	\$6,911.20	\$6,685.00	3	

Storey County

Hotels, restaurants and lodging-houses	\$67.50	\$62.50	\$53.80	\$75.00	\$258.80	\$292.50		14
Merchandise	340.00	420.00	311.95	397.50	1,469.45	1,508.50		3
Amusements and billiards	105.00	345.00	63.35	90.00	593.35	535.00	11	
Miscellaneous	102.60	117.50	113.68	90.00	413.68	652.50		34
County liquor	615.00	690.00	456.98	705.00	2,466.98	3,045.00		25
State liquor	\$1,230.00	\$1,565.00	\$1,023.64	\$1,387.50	\$5,181.14	\$6,083.50		17
Sheep-grazing	1,624.00	None	None	37.50	1,661.50	2,111.50		27
Totals	\$2,854.00	\$1,565.00	\$1,023.64	\$1,375.00	\$6,822.64	\$8,145.00		

Washoe County

Hotels, restaurants, and lodging-houses	\$715.60	\$454.70	\$394.30	\$379.05	\$3,123.65	\$2,516.25	24	
Merchandise	2,121.10	1,146.89	3,308.77	3,232.80	9,804.06	7,200.00	37	
Amusements and billiards	244.15	1,231.75	890.65	390.00	2,816.55	890.00	220	
Miscellaneous	761.90	600.02	1,015.11	601.60	2,976.63	2,842.50	5	
County liquor	3,266.72	1,997.82	3,205.00	3,065.25	11,524.29	12,405.00		8
State liquor	\$7,109.47	\$5,470.18	\$9,408.83	\$8,258.70	\$30,247.18	\$25,843.75	17	
Sheep-grazing	7,720.00	282.50	250.00	118.80	8,351.00	8,051.50	65	
Totals	\$16,204.47	\$8,157.68	\$9,668.63	\$11,082.20	\$43,073.18	\$36,600.25		

White Pine County

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$180.00	\$300.00	\$332.50	\$246.70	\$1,109.20	\$870.00	23	
Merchandise	786.00	1,080.00	1,006.00	650.85	3,530.85	2,787.50	28	
Amusements and billiards	1,905.00	1,895.00	880.00	188.50	3,818.50	960.00	800	
Miscellaneous	317.50	382.50	407.50	131.40	1,238.90	1,432.50		16
County liquor	1,710.00	1,845.00	1,765.00	1,257.50	6,567.50	7,280.00		11
State liquor	\$4,907.50	\$5,002.50	\$3,980.00	\$2,424.95	\$16,284.95	\$13,320.00	22	
Sheep-grazing	4,048.00				4,048.00	4,560.00		13
Totals	\$9,255.50	\$5,002.50	\$3,980.00	\$2,424.95	\$20,612.95	\$18,680.50		170

The State as a Whole

Character of licenses	First quarter	Second quarter	Third quarter	Fourth quarter	Total, 1913	Total, 1912	Per cent increase	Per cent decrease
Hotels, restaurants, and lodging-houses	\$3,272.35	\$3,256.19	\$3,549.70	\$3,603.25	\$13,681.99	\$11,784.75	17	
Merchandise	8,689.35	9,954.35	12,679.19	12,509.25	43,782.64	34,138.50	28	
Amusements and billiards	5,271.15	6,227.57	4,821.50	4,079.40	19,899.65	6,142.50	224	
Miscellaneous	3,219.90	3,538.84	3,940.79	3,086.89	13,786.42	15,984.50		16
County liquor	22,056.72	22,165.25	21,780.41	20,384.74	86,386.92	85,730.00	1	
State liquor	\$42,459.97	\$45,152.50	\$46,281.62	\$43,613.53	\$177,497.62	\$153,780.25	15	
Sheep-grazing	50,844.00	2,549.00	1,725.00	980.75	55,648.75	54,155.00	3	
Totals	\$100,512.97	\$50,488.50	\$54,461.87	\$51,421.23	\$256,884.62	\$222,981.25	15	

LIVE STOCK

When the question of live stock was brought up at the January meeting the Commission unanimously decided to allow the tentative agreement, had with livestock owners at the conference held in Reno in December, to stand, with the understanding that, should this agreement not be lived up to on the part of the owners, the Commission would take such action as they deemed the circumstances warranted when they should meet as a final State Board of Equalization in October.

No class of property offers more difficulties to the assessing authorities than live stock. While most other classes of property are more or less in sight and the value easily arrived at by the Assessor, the larger portion of live stock ranging over a vast extent of mountainous territory is seldom seen by the Assessor. In many sections the owners of live stock turned in for assessment purposes not the entire number, but only such portion of their holdings as they desired, and thus a large amount of this class of property escaped taxation entirely.

Through access to the United States records, forestry reports, Sheep Commission data, and field reports, it was ascertained that of a total estimated number of over 450,000 head of cattle, exclusive of yearlings, in the State, but 192,311 were turned in for assessment in 1913. Of 1,500,000 head of sheep but 688,920 were assessed in 1913. Of 68,000 horses and mules there were assessed 34,000, and of 17,000 hogs 6,000 were assessed. When it is considered that the valuation per head placed upon live stock that year represented but about 60% of the full cash value in order to equalize it with the value of other classes for assessment purposes, it will be seen that this class of property was not only being assessed at 60% of its value, but that value was only on a portion of said class of property. In other words, the livestock industry was assessed on an average for less than 25% of full cash value.

At a meeting held in December, 1913, with the livestock owners of the State, in Reno, to discuss the assessment of this class of property, it was finally agreed that the value per head for assessment purposes for 1914, based upon 60% of the average value of cattle throughout the United States, as per U. S. reports for 1913, should be: Cattle, including yearlings, \$20 per head; sheep, including lambs, \$2 per head. Hogs were placed tentatively at \$10 per head and pigs at \$5 per head. Where range stock was assessed, 20% was to be allowed for range losses. This agreement was contingent upon the livestock owners turning in the full number of live stock owned by them. There should therefore be returned by the livestock owners for assessment purposes for 1914, the following:

Cattle.....	350,000 as against 192,311 in 1913
Sheep.....	1,125,000 as against 688,920 in 1913
Hogs.....	17,000 as against 6,000 in 1913
Horses.....	68,000 as against 34,000 in 1913

The following table shows the number of cattle and sheep by counties, as assessed in 1913:

	<i>Cattle</i>	<i>Sheep</i>
Churchill.....	4,127	49,108
Clark.....	1,143	-----
Douglas.....	5,634	22,796
Elko.....	73,087	102,495
Esmeralda.....	761	1,200
Carried forward.....	84,702	175,598

	<i>Cattle</i>	<i>Sheep</i>
Brought forward.....	84,702	175,508
Eureka.....	12,496	19,200
Humboldt.....	30,490	131,025
Lander.....	7,474	26,177
Lincoln.....	7,621	14,415
Lyon.....	9,390	27,121
Mineral.....	1,814	30,574
Nye.....	13,061	13,934
Ormsby.....	391	701
Storey.....	86	167
Washoe.....	19,222	144,823
White Pine.....	5,724	94,590
Totals.....	192,311	688,920

From the foregoing it may be seen that the total approximate valuation of live stock for assessment purposes for the year 1913, may be stated as follows:

Cattle.....	\$3,846,220
Sheep.....	1,722,300
Hogs.....	42,000
Horses.....	340,000
Total.....	\$5,950,520

If the agreement made with the livestock owners is lived up to, the valuation for assessment purposes for 1914, should be approximately as follows:

Cattle.....	\$6,750,000
Sheep.....	2,250,000
Hogs.....	170,000
Horses.....	680,000
Total.....	\$9,850,000

An increase of value for assessment purposes, after allowing for range losses, of \$3,899,480.

BANK ASSESSMENT, 1914

The Commission was able to profit by much more additional information than was obtainable in 1913 in determining the valuation of banks for assessment purposes for the year 1914.

It was conceded that the true full cash value of bank stock, and that which an investor would be reasonably willing to give to acquire ownership thereof, would be based upon its earning capacity. In all cases where this had been actually done and bona fide sales made that would reasonably represent the present value, such valuations were given due consideration. In other cases where net earnings were shown, and no sales or market value reported, the net earnings were capitalized at ten per cent, and the amount thus obtained taken as the full cash value. In other cases where it was not possible to work from this basis, the value was arrived at by using such information as was obtainable relative to capital stock paid in, surplus and undivided profits. In all cases after the full cash value for each bank was determined, there was applied uniformly throughout the factor of 60% for assessment purposes.

From the foregoing method of determining valuations a very considerable increase for assessment purposes was made over that of 1913, as will be noted by the following comparative statement:

<i>Name of Bank</i>	<i>Assessed 1913</i>	<i>Assessed 1914</i>
First National Bank of Ely	\$24,079	\$30,000
Lyon County Bank	23,345	40,074
Farmers and Merchants National Bank	133,500	132,000
Bank of Austin	25,600	15,000
Bank of Nevada Savings and Trust Company	63,175	64,386
Washoe County Bank	390,000	450,000
Nixon National Bank	690,000	504,000
Winnemucca State Bank and Trust Company	40,000	60,000
Scheeline Banking and Trust Company	85,500	72,000
Lovelock Mercantile and Banking Company	22,400	30,000
First National Bank of Lovelock	35,230	74,418
Mason Valley Bank	19,292	15,000
First National Bank of Elko	43,200	68,724
Tonopah Banking Corporation	31,350	130,278
Bank of Sparks	15,054	15,000
John S. Cook Banking Company	162,500	75,000
Bank of Pioche	10,000	15,000
McGill National Bank	14,500	36,498
Copper National Bank	24,800	30,000
First State Bank of Las Vegas	20,000	30,000
Bank of Wells	20,000	30,000
Nevada First National Bank	63,000	39,000
Carson Valley Bank	33,800	53,606
Henderson Banking Company	30,000	120,000
Quinn River Bank	8,600	11,400
Horton Banking Company	5,400	11,938
Douglas County Farmer's Bank	7,287	15,358
Farmers Bank of Carson Valley	6,750	32,400
Ely National Bank	11,480	15,000
Churchill County Bank	36,133	49,878
Winnemucca National Bank	121,980	180,000
Lincoln County Bank	4,000	6,000
Totals	\$2,271,985	\$2,451,958
		\$2,271,985
Net increase 1914 over 1913		\$179,973

Agency Bank of California left to Assessor of Storey County.

LEGISLATIVE RECOMMENDATIONS

This Commission recommends that the following constitutional changes covering the question of taxation be made:

First—That Article IX be amended so that the Legislature may by statute place the fixing of the annual state tax rate within the control of the Tax Commission or other administrative tribunal.

Second—That Article X be amended by abrogation of the "uniform rule" therein contained and the Legislature given freedom from all constitutional restraints on the taxing power.

The language of that part of Article X which comprises the "uniform rule" reads as follows:

The Legislature shall provide by law for a uniform and equal rate of assessment and taxation of all property.

In lieu thereof the section should be amended to provide that:

All taxes shall be uniform on the same class of property.

Many States throughout the Union have found it highly advantageous to make this change and it is especially endorsed by the National Association of Tax Commissioners, an organization of nation-wide tax economists created in 1907 with the following objects in view:

First—Greater freedom for Legislatures from constitutional restraints on the taxing power.

Second—A recognition of the failure of the general property tax and the necessity for the elimination of the so-called "uniform rule" in State Constitutions, thus making it possible to apply a different rate of taxation to property of a special nature.

Third—Changes from ad valorem to specific taxes.

Fourth—To improve assessments by establishing State Tax Commissions with supervisory powers over local Assessors and also by improving local assessment conditions.

At the beginning of the work of this association, at its first annual conference in 1907, the following resolution covering the urgent necessity for the removal of constitutional restraints on the taxing power was adopted:

WHEREAS, The greatest inequalities have arisen from laws designed to tax all the widely differing classes of property in the same way and such laws have been ineffective in the production of revenue, and whereas the appropriate taxation of various forms of property is rendered impossible by the restrictions upon the taxing power contained in the constitutions of many of the States.

Resolved, That all State Constitutions requiring the same taxation of all property, or otherwise imposing restraints upon the reasonable classification of property, should be amended by the repeal of such restrictive provisions.

The representatives in every annual conference since 1907 have unanimously agreed that Constitutions should be practically free from limitations on the power of the Legislatures to deal with the subject of taxation. They have arrived at this conclusion either by a knowledge of the benefits derived in their own States from the absence of such restrictions or from experience of the evils which such restrictions impose.

After a careful consideration of the question, the association takes the position that constitutional provisions relative to taxation should be confined to a statement of fundamental rights and purposes leaving the Legislature free to secure the needful revenue by any reasonable method.

Having the above considerations in mind, the association has recommended for adoption the following model constitutional provision which is deemed sufficient to cover the entire subject of taxation:

The power of taxation shall never be surrendered or contracted away. All taxes shall be uniform on the same class of property within the territorial limits of the authority levying the tax, and shall be levied and collected for public purposes only.

In passing it may be stated that the constitutional convention acting for the new State of Arizona adopted this provision verbatim and created a tax commission consisting of three members with power to supervise local assessments and to equalize assessment values as between individuals, classes and counties.

THE REASON FOR SUCH A CHANGE

The difficulty of administering our present uniform system of taxation and the necessity for a modification of Nevada's constitutional provision regarding taxation, in order to provide for a classification of intangible personal property, such as moneys and credits, and the application thereto of some reasonable rate of taxation, or the adoption of an income tax as a substitute for all personal property tax, is strongly

emphasized by a consideration of the confiscatory character of the equal rate of taxation as applied to moneys and credits under our present system and which makes the assessment of this class of property a dead letter.

For example: With the general property tax rates ranging from approximately 2% to 4%, or from \$2 to \$4 on the \$100 of value, in the various counties of our State, it is not surprising that this class of property goes into concealment and is not reported for the purpose of taxation.

Money on deposit in a bank at 4% interest, if rendered for taxation in a county where the tax rate is 4% would produce no income, and in a county where the tax rate is 2%, the income on a deposit would be reduced 50%—leaving a net return of only 2%. On invested credits bearing 8% interest, the tax in a county where the tax rate is 2%, or \$2 on the \$100 of value, would consume 25% of the annual income. In the county where the tax rate is 3%, there would be absorbed 37½% of the income and in the county where the tax rate is 4%, there would be taken from the income, in taxes, 50%.

An effort to strictly enforce taxes against moneys and credits would, under our present general property-tax system, have the effect of either largely increasing the interest rate, or forcing the moneys and securities into some other State, where property is classified and assessed on some just and reasonable basis, for investment or deposit.

The rate of taxation upon this intangible property should not exceed 5 mills on the dollar or 50 cents on the \$100 of value. This would produce a reasonable tax, amounting to only 12½% on the annual income from 4% loans and securities; 8½% on the income from 6% loans and securities and ½% on the income from 8% loans and securities.

With a system such as this in force, this form of property could, under the supervision of the Tax Commission, be easily secured for taxation. The law could be rigidly enforced without injury to or disturbance of investments and interest charges.

Minnesota and Wisconsin found after an investigation in 1911, that not exceeding 3% and 5% respectively of the intangible personal property (moneys and credits) was being returned for taxation, under the general property-tax system.

Due to the inherent defects in the system, it is not unfair to assume that no better results are secured in Nevada.

The reports of the state and national banks operating in Nevada, show that there is \$22,000,000 of this class of intangible personal property in Nevada available for taxation.

Dealing with the matter liberally and assuming that 10% of the intangible property held by the banks, as above explained, is listed for taxation it follows that about \$20,000,000 escapes. At a rate of 5 mills on the dollar, this would amount to an increase of \$100,000 in tax revenue annually to the State and counties.

IN GENERAL

An increase of \$800,000 was made in the assessed valuation of public utilities for the year 1913, and an increase of \$2,265,000 upon railroads over that rendered by the State Board of Assessors for the year 1913.

During the current year (1914) public utility property valuations have been increased approximately \$1,500,000 and railroad property \$4,211,000 making an aggregate increase in railroad and public utility

property since the Commission began its labors in April, 1913, of \$8,776,000. In addition to the above it is to be said that several hundred thousand dollars will be brought in at the October meeting from the assessment of private car lines which have heretofore been almost entirely escaping assessment.

When the Commission began its labors in April, 1913, the total assessed valuation of all property within the State was approximately \$106,000,000, whereas at this time it is estimated at about \$120,000,000. Of the increased valuation brought in it will be observed that approximately 60% of it has been taken from railroad and public utility property. The remaining 40% being made up of increases placed upon mining, livestock, and agricultural industries and normal increases through new property which is added to the roll from year to year.

In bringing about this result it is to be said that the increases were placed upon property which in the main was assessed unreasonably low and not contributing its fair share toward the support of the state government. In other words, little or none of the increased tax revenue which accrued therefrom was taken from property owners who were already paying upon the maximum valuations, comprising principally those who were least able to pay. Obviously had not the Tax Commission been created the small property owners would have been required to pay a substantial increase in taxes for the years 1913-1914, for the reason that either the 76- or 80-cent state rate contemplated by the Legislature would have been adopted and thereafter applied to all classes of property irrespective of uniformity in the assessment valuation thereof.

For the current year the state rate is, as heretofore shown, 60 cents, or a decrease of 10% from the year 1913. Further, as a result of the increased valuation brought about by the Commission for the year 1913 the county tax rates have been very substantially lowered in practically all of the counties throughout the State. Below will be found a comparative table of the county tax rates for the years 1913-1914, from which the decreases, above referred to, may be noted:

COMPARATIVE STATEMENT. COUNTY TAX RATES 1913-1914

County	1913	1914	Decrease	Increase
Churchill.....	\$1.70	\$1.45	\$.25	
Clark.....	1.40	1.40		
Douglas.....	2.25	2.05	.20	
Elko.....	1.28	.84	.44	
Esmeralda.....	1.65	1.65		
Eureka.....	1.23	1.15	.08	
Humboldt.....	1.09	1.10	----	\$.01
Lander.....	2.35	1.65	.70	
Lincoln.....	1.64	1.64		
Lyon.....	1.40	1.50	----	.10
Mineral.....	1.80	1.52	.28	
Nye.....	2.15	1.20	.95	
Ormsby.....	1.69	1.36	.33	
Storey.....	2.00	1.50	.50	
Washoe.....	1.00	.80	.20	
White Pine.....	1.50	1.35	.15	

As a result of large increases in the valuation of railroad and public utility property being brought in for the current year and those contemplated in other classes of property by the Commission at the coming October meeting, the prospects are bright for further very substantial

reductions in the county rates, preceding payment of the first installment of taxes in December.

In compliance with the revenue statutes of the State, the Commission has this year required the various County Commissioners to compile a budget of each county's estimated expenses for the year and upon the basis of this budget the county tax rate has been fixed in each county. Further, in fixing said rates the revenue to cover said budget expenses has been estimated upon last year's assessed valuation, and therefore, as the assessed valuation of property is increased during the current year, the Commission will, by order, require that the said county rates shall be reduced proportionately.

The various boards of County Commissioners have control of the county tax rates and under the law it is made their duty to lower said rates prior to the payment of the first installment of taxes in December, if it shall appear that the levy previously made by the said County Commissioners will produce a revenue in excess of the estimated requirements for county purposes.

It is further to be observed that under the law the various counties are bound by the budget of expenses which they have made and used in fixing the initial county rate. No departure from the expenses covered by the budget can be made and no relief in the matter of additional revenue can be secured except through the medium of the State Board of Revenue. Under this construction of the law the Commission will, by virtue of its general power of supervision over the entire revenue system of the State and counties, undertake to further reduce all county tax rates within the State in the same proportion that the increased assessment valuation of property is brought in upon this year's roll in each county, prior to the payment of the first installment of taxes in December.

Since its creation the Commission has made an extensive investigation leading up to a proper classification and valuation of lands throughout the State. This work had been conducted by experts under the able supervision of Commissioner Boyle up to the time of his resignation, and will be continued by the Commission. This work covers a wide range of territory and is exceedingly difficult, and while it will perhaps take two or three years in order to complete the work and do full justice in the matter of equalization between taxpayers, that thus far accomplished covering generally the entire State and in complete detail some three or four counties, has not been without substantial benefits. For example, the Commission is now in possession of information by which it will be possible to greatly improve the assessment of this class of property over what it has been in the past.

It is to be said that the well-defined policy of the Commission is to bring the assessment of all property up to "Full Cash Value" with as little delay as possible. In no other way can the full measure of equality in the distribution of the burden of government be effected and at the same time give to the State and counties the benefit of minimum tax rates, which as an inducement for the speedy and permanent development of Nevada's many resources is highly necessary and earnestly desired by all who stop to give this important subject a moment's consideration.

As, however, the Commission is not invested with control over the

state tax rate, the Constitution providing that it shall be fixed by the Legislature each two years, and because this power cannot be delegated to the Commission without constitutional amendment, the Commission can only bring the result of its investigation covering the "Full Cash Value" of all property before the next session of the Legislature for its consideration in reaching a conclusion as to how much the state rate should be reduced for the ensuing two years.

It is estimated at the present time, that following the conclusion of the Commission's work in October, the ratio of assessed valuation to "Full Cash Value" of all property within the State will very closely approximate 60%.

The Commission has received the earnest and conscientious support of practically all of the County Assessors and in fact all state and county officers since it began its labors. For this support the Commission is exceedingly grateful and trusts that it may have the benefit of the continued support and cooperation of all state and county officers, and all taxpayers in working out the many difficult problems which are before it for solution.

When the assessed valuation of all classes of property has been fully equalized as between the small and the large taxpayers of our commonwealth, and the assessment thereof has been brought somewhere near its "Full Cash Value" and the state and county tax rates have been correspondingly lowered, great and lasting benefits will be conferred upon the taxpayers by thus equally and fairly distributing the burden of government upon all classes, and by the maintenance of low tax rates induce prospective home seekers and capital to locate in our State.

Finally, it cannot be too strongly stated that the creation and maintenance of the State Tax Commission has many times more than justified the small outlay of money that has been required for its operation, in bringing about the foregoing results. In fact, the results thus far accomplished and those which are in contemplation at the October meeting of the current year will, upon fair consideration, clearly justify its continuation with such appropriation as may be necessary to carry on the work effectively for the years 1915-1916.

Respectfully submitted,

J. F. SHAUGHNESSY,
Chairman,
C. H. COLBURN,
Commissioner,
F. N. FLETCHER,
Commissioner.

ATTEST: L. F. ADAMSON,
Secretary.

Dated September 11, 1914.

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